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N. BANDYOPADHYAY

The Concept of LOGICAL FALLACIES

SANSKRIT PUSTAK BHANDAR • CALCUTTA-700006

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Problems of Hetvābhāsa in Navya-Nyāya in the light of Gaṅgeśa and Raghunātha Śiromaṇi

by

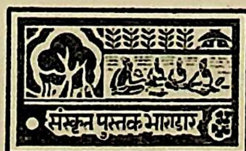
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with a foreword
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Thesis under the title, Problems of Hetvābhāsa in Navya-Nyāya, approved for the Ph.D (Arts) degree of Jadavpur University, Calcutta

First Published, February, 1977

Price : Rs. 70.00/ $ 14.00/ £ 9

Published by Sri Shyamapada Bhattacharya, Sanskrit Pustak Bhandar, 38, Bidhan Sarani, Calcutta-700006

and

Printed in India by Sri Suresh Dutta at Modern Printers, 12, Ultadanga Main Road. Calcutta-700067

To

my father and teacher

Sri Hemanta Kumar Ganguli

FOREWORD

I introduce this work to the academic world with pleasure and confidence. Dr. Nandita Banerjee's work on logical fallacies as developed in the Navya Nyāya school is really a solid contribution on a comparative study in Indian Logic and modern logical thoughts of the West. It has successfully and brilliantly tackled a logical problem which has been intensively studied and elaborated in India for several centuries without break. The technicalities of the Navya Nyāya language have scared away soft intellect, particularly in modern age which prefers the line of least resistance and avoids abstruse problems.

I admire the authoress for her courage and intellectual stamina. She has faithfully assessed the abstract speculations of Indian logicians and presented them in a modern language calculated to stimulate the interest of modern students of logic both in the East and the West.

The pivotal problem of the universal proposition and the minor premiss in inference deeply exercised the minds of the school of Diṅnāga and Dharmakīrti. After the destruction of Buddhist universities by the Turks, the problem was freshly studied by the Brahmin logicians of Mithila and later on of Navadvipa in Bengal. The study of Navya Nyāya is now practically approaching extinction.

The present writer has done the yeoman's service in salvaging these old thoughts in the idiom of modern logic and making them sufficiently intelligible to the modern mind. She has demonstrated the depth and subtleties of Indian thinkers, who were not dissuaded by political vicissitudes from their intellectual pursuits. I trust that the present doldrums will pass away in due course and the academic world both in the East and the West will address itself to the eternal problems of logical thought. India's contributions will then receive due appreciation.

Dr. Nandita Banerjee's work is expected to be hailed as a pioneer attempt in this field. It will not be too much to hope that it will stimulate fresh study in the modern academies. I congratulate the young authoress on her success and intellectual courage. I bestow my blessings on her and pray for her long life of academic pursuits so that she may enrich the intellectual atmosphere by further contributions.

SATKARI MOOKERJEE

Calcutta, 23-10-76

PREFACE

This work mainly embodies the thesis entitled, "The Problems of Hetvābhāsa in Navya Nyāya", which was approved for the Ph.D (Arts) degree of Jadavpur University, Calcutta. It is presented here with some additions and alterations which have been felt necessary to make it more presentable for publication. In the process I have tried to accommodate some valuable suggestions from some learned critics who kindly went through the copy before the print.

I take this opportunity to express my respectful gratitude to that great savant Professor Satkari Mookerjee, the doyen of Anglo-Sanskrit scholarship, for his kind words of encouraging appreciation embodied in the foreword to this book ; to my respected teacher and supervisor of my thesis, Professor Ramaranjan Mukherji, Vice-chancellor, Burdwan University and Head of the Department of Sanskrit (on lien), Jadavpur University, for all he has done to promote my academic career ; to my respected teacher Professor Gopikamohan Bhattacharya, Head of the Department of Sanskrit, Kurukshetra University, who inspired my initial interest in Indian Logic, for his immensely valuable advice and high appreciation ; to my respected teacher Sri Bidhubhushan Bhattacharya for the kind help he has often rendered me by his expert and versatile knowledge ; to Professor Siddheswar Bhattacharya, formerly, Head of the Department of Sanskrit, Benares Hindu University and Visvabharati University, for his kind appreciation and constructive suggestions.

I can never say too much of what my father, Sri Hemanta Kumar Ganguli, has done for the advancement of my education and academic life. But paternal affection is too deep to be measured by thanks and too soft to be burdened by expressions of gratitude from a daughter.

I offer sincere and grateful thanks to all my teachers, colleagues, friends and well-wishers for their kind words of inspiration and encouragement.

I am grateful to Sri Subas Dutta of the administrative office, Jadavpur University, for his unstinted labour in making a beautiful type-script out of a not-too-handsome handscript ;

—To Sri Shyamapada Bhattacharya of Sanskrit Pustak Bhandar for daringly undertaking the publication of this book which does not hold much promise of profit in these days when interest in Sanskritic studies in general and Navya Nyāya in particular is fading fast ;

—And to Sri Suresh Dutta of Modern Printers for his ungrudging labour in supervising the work through the press.

My inexperience in proof-reading has been responsible for some unfortunate printing mistakes creeping into the body of the book for which I tender sincere apology to the well-meaning readers who are requested to kindly take notice of the corrigenda placed at the end.

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of Sanskrit
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Calcutta,
1st January, 1977.

NANDITA BANDYOPADHYAY

CONTENTS

INTRODUCTION

This dissertation is a modest attempt to clarify the difficult logical concepts involved in the different definitions of *hetvābhāsa*, both in the general and the special definitions, which have been proposed and examined by Gaṅgeśa and Raghunātha. This is an attempt to interpret in a modern language, and partially in a modern method, the abstruse notions of logical fallacies which are couched in a formidable array of Navya-Nyāya technicalities. The *hetvābhāsas*, or the fallacies of the middle term, are the logical fallacies in the proper sense of the term, because they are primarily concerned with the improper application of the *hetu*, the 'reason', the middle term, which occupies the pivotal position in syllogistic deduction.

In the very first general definition of *hetvābhāsa* Gaṅgeśa introduces a highly significant correlative notion of truth and falsity the importance of which extends beyond logic to the domain of general philosophy. Gaṅgeśa says that the fault of the probans or the middle term lies in its being the object of a *valid* contradictory propositional knowledge. On the face of it the definition appears puzzling indeed, since it suggests some such second-tier super-proposition as—"A false proposition is the object of the valid knowledge of a true proposition". Apparently it is an enigmatic statement. But what Gaṅgeśa really suggests is not so baffling as it appears in our extreme form of the super-statement. In the world of facts there is no such object which may be called a 'false fact'. A fact is what it is, and by itself is neither true nor false. So a false proposition does not correspond to a 'false fact', but a true proposition corresponds to a fact. Hence we face a very pertinent question, —what does then make a false proposition false ? Gaṅgeśa's first general definition of *hetvābhāsa* suggests an answer to this fundamental question of logic and philosophy, and we are pleasantly surprised to find that Gaṅgeśa's suggestion has been amply confirmed by Bertrand Russell in his 'Philosophy of Logical Atomism'.

Let us take the following from Russell's Philosophy of Logical Atomism (Logic and Knowledge, pp. 183—84)—"When we speak falsely it is an objective fact that makes what we say false, and it is an objective fact which makes what we say true when we speak truly. ...It is obvious that there is not a dualism of true and false facts; there are only just facts....A fact cannot be either true or false". A false statement can be pronounced false only in so far as there is a *true* statement which we *know* to be true. Thus it is the true statement that operates as the *falsifier* of a false statement. It is the valid knowledge of a true statement which acts as the *invalidator* of the invalid knowledge. In this sense the truth of the contradictory statement constitutes the falsity of the false statement, the validity of the contradictory knowledge constitutes the invalidity of an invalid knowledge. This means that a false proposition necessarily entails a true proposition, an invalid knowledge necessarily entails a valid knowledge. This fundamental notion of the correlation of falsity and truth is found operating in Gaṅgeśa's general definition of *hetvābhāsa* :—"A wrong reason is the object of a valid contradictory knowledge".

Since there is no false fact it is nonsense to say that a true fact contradicts a false fact. This consideration has led Gaṅgeśa to proceed up to the level of knowledge in order to fix the contradiction. Suppose 'A is B' is a false proposition. Its falsity is determined by the true proposition 'A is not-B'. When I say, 'A is not-B' contradicts 'A is B', the contradiction must figure in my knowledge. The mere existence of the objective fact corresponding to 'A is not-B', remaining unknown and unnoticed, does not contradict anything. Contradiction, in this sense, is a logico-epistemic relation which must be entertained in knowledge. Hence it is the valid knowledge of the true proposition 'A is not-B' which contradicts the invalid knowledge of the false proposition 'A is B'. The false proposition figuring as the object of invalid knowledge is only an *epistemic object-content* without any *correspondence* to an *objective* structure of fact.

In this context a distinction should be made between logical implication and epistemic implication. In a pair of contradictories such as,—*p* (i.e., A is B) and not-*p* (i.e,, A is not-B), it is true that the truth of *p* logically implies the falsity of not-*p*. But it is not an epistemic implication. To say and know it to be true that the child is crying one need only look at the fact, but need not necessarily entertain in knowledge the logical equivalent that, "(the child is not crying) is false." But to say and know it to be false that the child is not crying, one must have the pre-established knowledge that it is true that the child is crying. One must look at the fact and confidently entertain in knowledge the truth of the proposition, 'the child is crying', before enterta-ing and asserting the falsity of the proposition, 'the child is not crying'. Thus what is true may be known and asserted to be true without reference to what is false. But what is false cannot be known and asserted to be false without reference to what is true. This shows that a false proposition *both logically and epistemically* implies a contradictory true proposition, while a true proposition, *only logically*, but *not epistemically*, implies a contradictory false proposition.

This difference follows from the consideration that a false proposition does not directly *correspond* to a fact. Correspondence means "*artha-sārūpya*" or '*viṣaya-sārūpya*', i.e., structural resemblance between propositional knowledge and its factual object. Hence it is the valid knowledge of a true proposition which possesses the correspondence, but not the invalid knowledge of a false proposition. It is true that the same fact which makes a true proposition true also makes its contradictory false. But that does not mean that the false proposition *corresponds* to the fact. A false proposition has only an *indirect reference* to the fact through the valid knowledge of the true proposition which corresponds to the fact and contradicts the false proposition. Thus the fact falsifies a false proposition only finally, but not directly. The direct and immediate falsifier of a false proposition is the valid *knowledge* of an acceptedly true contradictory proposition which corresponds to the fact.

Without taking all these into consideration one cannot reasonably account for the spectacular definition of fallacy that has been proposed by Gaṅgeśa, namely,—The fault of a probans is its being the object of a contradictory valid knowledge which inhibits an inference. In other words, the invalidity of an assumed probans is the very validity of a contradictory knowledge which successfully resists the inference concerned. and exposes the incapacity of the probans to lead to the desired conclusion.

A false inference is a false knowledge the falsity of which is determined by the valid knowledge of a true proposition, This is the significance of the expression *yathārthajñāna-viṣayatva* appearing as a constituent of the first general definition of *hetvābhāsa*. Thus in the false inference—"the pitcher is permanent, because it is knowable (ghaṭaḥ nityaḥ prameyatvāt)" its fault or falsity is constituted by the true proposition, "there are knowables without being permanent", which figures as the object-content of a valid knowledge that contradicts the invalid knowledge of the falsely assumed major premise—"whatever is knowable is permanent". In this way the fault of this false inference is the true proposition,—"there are knowables which are not-permanent",—[{(nityatvābhāvaviśiṣṭaprameya)-tvavān ghaṭādiḥ} vyabhicāradoṣaḥ]. This central notion that a false proposition always entails a true proposition and that in this sense the very falsity of the false proposition is constituted by the truth of a true contradictory proposition, operates as a unifying thread running through the entire course of Gaṅgeśa's dissertation on *hetvābhāsa* both in its general and special aspects.

This correlative notion of truth and falsity is fundamental both to logic and philosophy. Since philosophy in general is an enquiry into truth, what is most fundamental in our knowledge of the universe is the truth. This even explains the Advaita position that the phenomenal world cannot be declared false or unreal without assuming the basic reality of something existing as the background of falsity. So Pan-nihilism cannot be legitimately entertained either in logic or philosophy. Again,

this fundamental notion of truth has prompted the half-hearted empiricist Russell to declare that absolute empiricism is untenable. The entailment of truth by falsity has led Russell to make the interesting observation that even a liar tells a lie in the expectation that his lying statement will be accepted as true by others ; thus truth is the rule and lie the exception (Inquiry into Meaning and Truth, p. 28).

In the field of false inference the probans or *hetu* itself is affected by the truth of the contradictory proposition entertained as the object-content of a valid contradictory knowledge. To know that a true proposition contradicts a false proposltion, i.e., to make *contradiction* itself appear as an object of knowledge, it is necessary to weigh together two contradictory propositions, the true and the false, in a single composite structure of knowledge. If the two propositions completely live apart in two completely dissociated structures of knowledge, how can we balance the one against the other and show that the one is false by virtue of the truth of the other ? Hence to know and pronounce the contradiction, the false and the true propositions must be somehow associated together in a single composite structure of knowledge in which the falsity of the one is brought into bold relief against the truth of the other.

Raghunātha and his commentators have not clearly explained the nature of this associated knowledge, but have remained content with the relational concept of '*ekajñānaviṣayatva*' which literally means that the wrong probans, somehow being associated with the valid contradictory knowledge, figures as an object-content of that knowledge along with the true proposition. The expression '*ekajñānaviṣayatva*' may be translated as 'cognitive co-contentiveness', i.e., the wrong probans and the true contradictory proposition should somehow appear as co-contents in a single knowledge-complex. In this way even the wrong probans is invaded by the objective referent of the valid contradictory knowledge through this relation of *co-contentiveness*. The basic reason behind the assumption of this particular relation may be unfolded through the interpretatation that has been offered

above and will be offered again in some details in the first chapter of this dissertation.

Anyway, what is false, to be known as false, must be contrasted against what is true and known as true. This requires such a composite super-knowledge as,—"This is true and this is false". Thus the false proposition to be pronounced false must someway or other become the object of a valid knowledge through the relation of co-contentiveness. The probans possessing the pivotal importance in a syllogism must itself be vitiated by the falsity of the inference. If this is so, the wrong probans itself cannot remain dissociated from the contradictory valid knowledge that pronounces the inference as false. For the sake of association we require some such knowledge-complex,—"The contradictory of a premise, or of the conclusion, is established as true ; and so the probans is misapplied". The traditional interpretation of this association has been questioned in the first chapter as being inadequate.

In the second general definition, the Nyāya position that there cannot be a 'false fact' is underlined by dropping the word 'yathārtha' (valid) which figures in the first definition. It shows that the notion of validity of the contradictory may operate from the background without needing its express mention in the body of the definition itself. Somebody may falsely entertain a contradictory false proposition as true, and as a result even a true inference may be inhibited through a false contradiction. Thus if we confine our consideration to contradiction alone there is danger of even a valid inference being pronounced invalid. The word 'yathārtha' in the first definition was inserted to stave off such an unwelcome logical possibility. It goes to the credit of Raghunātha to show that this avowed purpose may be served even without the term 'yathārtha'. The false proposition 'A is not-B' has a false structure in the sense that the predicate is falsely predicated of the subject. By the *object* of a contradictory knowledge we mean a fact represented in such a proposition as in which the predicate is objectively or factually predicated of a subject *(viśiṣṭaviṣayakatva)*.

The false proposition 'A is not-B', though entertained as true, does not possess this 'factive' objectivity. Hence in such a case there is no real contradiction, because the contradictory does not correspond to a real object.

Raghunātha's position will be elaborately explained in the third section of the first chapter. What may be pointed out here is that the impossibility of a 'false fact' is the central notion working behind Raghunātha's preference for the second definition. There is no objective fact to which the false proposition 'A is not-B' may correspond, and this is enough to preclude the case of a false contradiction.

In the fourth section of the first chapter one will find the formulation of the Law of Sufficiency to explain and *reinforce* Raghunātha's '*viśiṣṭāntarāghaṭita*'-definition and also Gadādhara's '*viśiṣṭadvayāghaṭita*'-modification.

After explaining, examining and modifying the general definitions proposed by Gaṅgeśa, Raghunātha virtually comes to the decision that a real general decisive definition of *hetvābhāsa* is hardly possible. At least this seems to us to be the keynote of the definition finally favoured by Raghunātha—"yāvanto doṣāḥ sambhavanti tāvadanyānyatvaṃ hetvābhāsatvam", which finally turns out to mean that a *hetvābhāsa* is any one among all faults that are possible in a particular case of inference. In the last section of the first chapter this definition has been subjected to elaborate criticism in order to show that this cannot be a real definition and that this is only an indirect admission of the impossibility of a real definition.

The next five chapters deal with the five broad types of *hetvābhāsa* coming down from the tradition of Gautama. While going to explain the general definitions of *savyabhicāra* we have explained at length the meaning of the term '*anaikāntika*' and have attempted to show how through their clear interpretation of this term Vātsyāyana, Uddyotakara, Dharmakīrti and Dharmottara anticipated the notions of exclusive and inclusive disjunction with which we are familiar in modern logic. The disjunction,—[(x is y) or (x is not-y)] becomes inclusive if

x is y for *some* values of x, and not-y for *some other* values. Such an inclusive disjunction constitutes the *vyabhicāra hetvābhāsa* directly affecting the major premise which requires—"x is y for *all* values of x". It has been shown how all the three types of *savyabhicāra* are finally invaded by the shadow of an inclusive disjunction.

In *bādha* and *satpratipakṣa*, after detailed examination of the respective positions of Gaṅgeśa and Raghunātha, we have finally upheld the standpoint of Dharmakīrti who has, we think, advanced almost insurmountable objections against *bādha* and *satpratipakṣa* being counted as independent types of *hetvābhāsa*. In this context we have explained also the Vaiśeṣika standpoint, especially strengthened by Vallabhācārya who in his objections against *bādha* and *satpratipakṣa* roughly follows the footsteps of Dharmakīrti.

But granted that *satpratipakṣa* may be accepted as an independent logical fallacy, we have balanced the views of Gaṅgeśa and Ratnakoṣakāra and have found the balance tilting in favour of the latter. Some expressions of Gaṅgeśa himself, such as 'kimatra tattvam iti jijñāsā', have compromised his own position. If *satpratipakṣa* or antinomical confrontation results in the enquiry—'what is the truth ?', how can we then escape the conclusion of Ratnakoṣakāra to the effect that antinomy does not result in the total blockade of conclusion, but does result in some conclusion in the form of a disjunctive doubt such as [either (A is B) or (A is not-B) is true] ?

The concluding section of our discussion on *bādha* elaborately examines Raghunātha's wellknown instance of *asaṃkīrṇa* or unmixed *bādha*, namely, 'utpattikālāvacchinnaḥ ghaṭaḥ gandhavān pṛthvītvāt'. It has been shown how even this instance cannot meet the objections raised by Dharmakīrti centuries before. Dharmakīrti and Prajñākara would have rather happily welcomed this instance as bringing grist to the mill of the Buddhist doctrine of momentariness.

The chapter placed as an appendix deals with some observations of Dharmakīrti and with the classification of *hetvābhāsas* given in the Nyāyapraveśa which is sometimes ascribed to Diṅnāga. The six types of *anaikāntika* have been rearranged in order to show the descending order of the range of violation involved in a faulty universal major premise. Among the four types of *viruddha* the last two types, namely, *dharmisvarūpaviparītasādhana* and *dharmiviśeṣaviparītasādhana*, have been shown to be thoroughly unconvincing instances of *hetvābhāsa*. The examples of *hetvābhāsas* given in the Nyāyapraveśa and the Nyāyabindu are sometimes interesting, because they are mostly concerned with showing the inadequacy of logic behind the philosophical positions of the opponents of Buddhist philosophy. Thus though Dharmakīrtī does not recognise *satpratipakṣa* or antinomy as a separate logical fallacy, yet he goes out to support Diṅnāga's inclusion of the same in his scheme on the following ground :—It is sometimes necessary to block the untenable propositions of the dogmatic systems. With this consideration in view the Ācārya has included '*viruddhāvyabhicārin*' (*satpratipakṣa*) in his scheme, though this fallacy easily passes into the fold of *anaikāntika* or *asiddha*. To show *āśrayāsiddhi* the Buddhists do not resort to such extreme and absurd examples as sky-lotus or golden mountain, but to such a proposition as, "ākāśaṃ dravyam", which is disputed by those who do not recognise 'ākāśa' as a substantive reality.

This dissertation is mainly concerned with an interpretative discussion on the general and special concepts of logical fallacies as they have been developed by Gaṅgeśa and Raghunātha. I have marked the continuity from the old Nyāya to the Navya Nyāya and have also noted the points of departure that have gone to enrich the latter. The Buddhist position has come up for discussion only in so far as it is demanded by the principal context. In elaborating the Buddhist standpoint I have drawn heavily upon Dharmakīrti's Hetubindu and Arcaṭa's commentary thereon. This dissertation is perhaps the first attempt at elaborating and interpreting in a modern language, partially in

a modern method, the abstruse Navya-Nyāya concepts of *hetvābhāsa* involved in the penetrating discussions of Gaṅgeśa and Raghunātha. I have tried my best within the limited compass of my knowledge and capacity; and it is for the learned critics to measue the amount of my success or failure, and to offer suggestions for improvement of the interpretation that I have humbly attempted.

CHAPTER—I

GENERAL DEFINITION

Section I

THE FIRST DEFINITION

Gaṅgeśa's first general definition of 'hetvābhāsa' runs as follows :—

"anumiti - kāraṇībhūtābhāva - pratiyogi - yathārtha - jñānavi - ṣayatvam"

(A. C. G.—p. 1580)

[The fault of a middle term is its being the object of some *valid* knowledge which is the counter-correlate (pratiyogin) of such an absence as is a causal condition of inference.]

An obstacle to an effect is that the absence of which is a necessary causal condition of the effect. The obstacle is thus the counter-correlate of such an absence (kāraṇībhūtābhāva-pratiyogitvaṃ pratibandhakatvam). If some valid knowledge stands as an obstacle to an inference it is by definition the counter-correlate of such an absence as is neccssary for the inference to be validly possible. The presence of such a valid knowledge as is the counter-correlate of such an absence invalidates or inhibits the possible inference, and holds by implication that the probans (middle term) is incapable of leading to the desired conclusion. In this sense the fault of the probans consists in its being the object of a valid knowledge which as a valid contradiction invalidates the inference under consideration.

Suppose somebody argues :—the lake has fire, because it has smoke. It is already established by perception that a lake has no fire, or, is the locus of the absence of fire. This valid perceptual congition, or this inductive generalisation based on perception, stands in crying contradiction to the supposed inferential knowledge, since by definition the probans cannot

co-exist in the same locus along with the absence of the probandum (major term).

Now a question naturally arises,—How "the lake having the absence of fire (vahnyabhāvavān hradaḥ)", which is the object of the contradictory valid knowledge, constitutes the fault of the middle term. According to the definition of 'hetvābhāsa' the probans, to become faulty, should be the object of the contradictory valid knowledge. But the probans 'dhūma' does not figure in the object-content of the valid knowledge that a lake has no fire. To obviate this difficulty the Naiyāyikas have proposed a relation called 'ekajñānaviṣayatva' or cognitive co-contentiveness, i.e., 'being the object of the same knowledge'. The idea behind this supposition may be analysed as follows :—

The valid contradiction of the inferential conclusion successfully counters the syllogism as a whole. The counter-knowledge, "a lake has no fire", counters not only the conclusive proposition, "the lake has fire", but also the entire syllogism which thoroughly falls through. As such it also counters the probans 'dhūma' by showing up its ineffectiveness as the middle term. Hence to know that a lake has no fire, in the context of the syllogism concerned, is the same as to know, or is logically equivalent to the knowledge, that the probans is incapable of leading to the conclusion which in definitely controverted by the knowledge of a universally accepted valid contradictory proposition. Strictly speaking, this is an implicatory knowledge. Thus by implication the object of contradiction extends upto the probans. In this sense of logical equivalence the contradictory proposition, 'a lake has no fire', and the proposition, 'the probans dhūma is ineffective', become the objects of a total composite knowledge, such that the probans itself figures in the total object-content. In other words, the contradictory knowledge which directly counters the conclusive proposition, 'the lake has fire', and the implicatory knowledge which counters the probans 'dhūma' by pronouncing its inefficiency, are taken together as one complete knowledge of equivalence which has for its co-objects both the 'lake qualified by the absence of fire',

and 'dhūma' figuring as the probans. Thus the fault of the middle term rests in the 'falsifying' capacity of a true proposition the knowledge of which validly contradicts or inhibits an inference. A proposition can be declared false, or, a knowledge invalid, only in so far as there is some contradictory valid knowledge corresponding to a contradictory true proposition. The true proposition is the *falsifying* proposition and the valid knowledge is the *invalidating* knowledge. It is the truth of another proposition which is the fault of a false proposition ; it is the validity of another knowledge which is the fault of an invalid knowledge. A false proposition implies a true proposition ; an invalid knowledge implies a valid knowledge. This relation of implication between falsity and truth is the deeper logical and epistemic significance of Gaṅgeśa's definition of 'hetvābhāsa'.

It is doubtful if the traditionalist interpretation of 'ekajñāna-viṣayatva' is sufficient to explain the association between the middle term and the fault of the inference. Let us again state problem :—

Here is a fallacious inference—"whatever has smoke has fire ; the lake has smoke ; therefore the lake has fire." Even leaving aside the falsity of the minor premise, the conclusion looks absurd on the very face of it, because it is immediately blocked by the true contradictory proposition, "the lake has no fire", which is the object of a valid knowledge. Hence this true contradictory proposition constitutes the fault of the false inferential conclusion. Let the false proposition be called p, and the true not-p. It is agreed that not-p is the fault of p. That means that both p and not-p must figure as co-contents (ekajñāna-viṣaya) under such a single second tier valid cognition as,—'p is false, because not-p is true'. In this way p also becomes the object of a valid cognition that impedes an inference. The question is,—then how does not-p become the fault of the middle term 'smoke' which is not the object of such a contradictory valid knowledge as has been shown above. Yet the definition requires that 'smoke' too must be an object of valid

contradiction, because it is the fault of the probans (or faulty probans) which is intended to be defined.

To remove this difficulty the traditionatists are found to explain the matter in this way—"The lake having absence of fire (i.e. not-p, the fault) and the probans 'smoke' are taken together as co-contents in a single *collective* cognition (samūhālambana jñāna). Thus in this relation of cognitive co-contentiveness (ekajñāna-viṣayatva) the probans 'smoke' also becomes associated with the fault, i.e. not-p. So the probans is faulty, being the object of a single valid collective cognition along with not-p that contradicts p.

But this traditional explanation creates difficulty in another way. A collective cognition is a cognition having for its objects two or more distinct and separate contents taken together in a single collection. Over and above the relation of being co-contents of the same cognition these distinct contents hold no other relation among themselves. It is not a 'viśiṣṭajñāna' (knowledge of a qualified content) of the type, 'the mountain has fire.' Here 'mountain' and 'fire' are not simply distinct and separate co-contents of the same knowledge, because what we know here is not simply "mountain *and* fire," but fire as being *predicated* of mountain. The knowledge does not grasp the two terms as such, but grasps the predicational relation between the terms. What we get here is a qualificational knowledge of mountain as being predicatively qualified by fire. So it is 'viśiṣṭa-jñāna'.

But such a knowledge is quite different from the collective cognition,—"This is mountain *and* this is fire." Now suppose 'this is fire' is a true proposition which contradicts the false proposition 'this is not-fire'. As such the former constitutes the fault of the latter. But should we say that by virtue of its co-contentive association with the fault 'this is fire', the proposition, "This is mountain" also becomes faulty? It is patently absurd. The property of "being the fault" belonging to one associate cannot be imposed on another associate simply through the relation of cognitive co-contentiveness.

We may take a boy and his old father in a collective vision, but it is too fantastic to suggest that thereby the boy also has taken on the infirmity of his father.

"The mountain has fire, because it has smoke" is a correct inference, while "The mountain has donkey because it has smoke" is a wrong inference. The fault of the inference lies in the true proposition that there is smoke even in the absence of the donkey, which contradicts the false major premise—"wherever there is smoke there is donkey". Now let us have a collective cognition taking together the probans 'smoke' (in the correct inference) and the proposition, "Smoke exists in the absence of donkey", which falsifies the wrong inference. Now should we say that by virtue of 'ekajñānaviṣayatva' the correct probans 'smoke' in the first inference is also vitiated by the fault of 'vyabhicāra' (violation of the major premise)? Certainly not. Hence it is suggested that in fixing the fault on the probans our attention should be limited to the valid contradiction of the particular inference involving the particular probans in relation to the particular probandum and the particular minor term. Thus the valid contradictory proposition, "smoke exists in the absence of donkey", which constitutes the fault of a wrong inference cannot be allowed to invade the probans of a correct inference by virtue of any possible 'ekajñāna-viṣayatva'

[see Prabhā com. on Muktāvalī p.514 and also Muktāvalī p.515. Madras edition. Also see Dīdhiti—A.C.G p.1604 :—

"atha parvatatvena pakṣatve vahnitvena sādhyatve viśiṣṭa-dhūmatvena ca hetutve......taddharmāvacchinnatatpakṣaka-taddharmāvacchinnatatsādhyaka - taddharmāvacchinnataddhe - tukānumitipratibandhakatvaṁ vācyam"]

Gadādhara also explains that the total particular inference involving the particularities of relation among all the three particular terms should be kept in mind while it is said that the contradictory valid knowledge preventing the inference vitiates the probans 'smoke' which is employed for inferring

fire in the lake. (see Gadādhara's interpretation of "hrade vahnisādhane dhūmo duṣṭah"—A.C.G. p. 1633).

All this shows that simply a collective knowledge taking together two separate co-contents such as, {(the lake has absence of fire) *and* (smoke is the minor term)},—"harado vahnyabhāvavān dhūmaśca hetuh", cannot explain how the fault in this case is attached to the probans 'smoke'. To fix the fault on the probans we require such a second order complex judgment as,—[smoke is employed as a probans supposedly leading to the conclusion, 'the lake has fire', which is, however, blocked by the valid knowledge of the contradictory proposition, 'the lake has absence of fire'.]

It is only within the orbit of such a total object-complex of such a total second order cognitive complex that the fault, namely, the lake has absence of fire, can be said to vitiate the probans 'smoke', which appears as a co-content along with the fault within the total content of the total knowledge. The probans is at fault, because the valid contradictory knowledge blocking the conclusion shows up the impotence of the probans. This impotence cannot be brought out simply by a collective knowledge (samūhālabanajñāna) of—"this *and* that". But, for this we require the complex structure of a second order knowledge as we have shown above, involving a net-work of relations in which a contradictory valid proposition figures as demolishing the relation between the probans and the conclusion. This is far beyond the scope of a simple collective cognition that only adds together two separate contents, namely, 'the lake has no fire' and 'smoke is the probans'.

This is why we reject the view of those traditionalist teachers who sometimes relate cognitive co-contentiveness (ekajñānaviṣayatva) to a mere collective cognition (samūhālambanajñāna).

In his interpretation of the first definition of hetvābhāsa Raghunātha suggests an improvement which is calculated to

fill in a lacuna. It is well-known that in Indian logic the major premise of a syllogism, which is an inductive generalisation, must be materially valid. An instance that goes against the generalisation is called 'vyabhicāra' or violation of the supposed universal relation between the probans and the probandum, which is called 'vyāpti'. This violation bespeaking the material invalidity of the major premise is also a fault of the middle term.

Suppose somebody argues :—this mountain has got smoke, because it has fire. This condensed syllogism may be expanded into the normal tri-propositional structure as follows :—

Whatever has fire has smoke
This mountain has fire
∴ This mountain has smoke

The major premise is false, since there is at least one instance of fire (the probans) existing along with the absence of smoke (the probandum) in a common locus, namely, a red-hot iron-ball. The true proposition, "fire exists without smoke in red-hot iron", constitutes the violation or fault of the generalisation, 'whatever has fire has smoke', because the valid khowledge of this true proposition, which falsifies the major premise, contradicts the invalid knowledge of the false generalisation. We remember that the definition of hetvābhāsa literally speaks of contradiction to inference itself, that is, the inferential knowledge embodied in the conclusion. But the knowledge that there can be fire without smoke directly contradicts the knowledge of the generalisation, 'whatever has fire has smoke', and not the conclusive inferential knowledge that this mountain has smoke. In other words, the absence of the valid knowledge of any violating instance is the direct causal condition of a correct generalisation, but not of the deductive conclusion itself. The valid knowledge that directly contradicts the inferential conclusion, 'the mountain has smoke', is that 'the mountain has no smoke', and not that 'some fire exists without smoke'. Hence the case of 'vyabhicāra' or violation of the universal major does not strictly conform

to the letters of the definition, since what is contradicted is not the inference (anumiti) as such, but the major premise of the inference.

To circumvent this difficulty Raghunātha proposes that the term anumiti in the definition should be taken as standing for either the conclusive inferential knowledge (anumiti) or the knowledge operating as its causal instrument. The term 'anumiti' thus takes the secondary sense of 'anumitikāraṇa' or the cause of inference, along with its primary meaning, that is, the inferential knowledge itself. This type of extension of meaning to the secondary dimension is called 'ajahallakṣaṇā', i.e., a meaning-relation by which a secondary sense is accepted without sacrificing the primary one. According to the Naiyāyikas the secondary plane of meaning must be related somehow to the primary plane. Here the relation between the primary and the secondary meanings is one of causality. The property of being an effect (kāryatva) belonging to 'anumiti' is determined by the causal relation of which the other term or relatum is the cause itself. The above idea is technically set forth in the following words :

"tatra anumitipadam anumitiniṣṭha-kāryatā-
nirūpakasambandhitvena anumiti-tatkāraṇajñā-
naparam" (A. C. G. p. 1580)

Now lakṣaṇā or the secondary meaning-relation is considered to be an inferior operating apparatus which is resorted to only when there is no other way out. So Raghunātha suggests the expansion of the meaning of the term 'anumiti' in some other way :—

"sādhyavyāpyahetumān pakṣaḥ
sādhyavān ityākārānumitiparaṃ vā" (Ibid)

Raghunātha's intention may be best brought forth by a comparison with the ideas and methods of modern logic. Let us take the following Aristotelian syllogism in Figure I :—

All men are mortal
Rama is a man
∴ Rama is mortal

In modern logic the internal relation of a syllogism is turned into a relation of implication. The two premises together imply the conclusion. Let 'p' stand for the first premise, 'q' for the second, 'r' for the conclusion, the sign '.' for togetherness and the sign '$\supset$' for implication. Then '$p . q \supset r$' gives the total structure of the inference. The Naiyāyika's concept of 'parāmarśa' directly leading to the inference brings out this inferential structure based on the relation of implication in another language. It is clearly recognised that the knowledge of the two premises in isolation does not give us the conclusion. They must be co-ordinated in a common structure. So the sense of the conjunctive 'and' in 'p.q' must not be taken in the sense of simple togetherness or arithmetical summation. The two premises must go to form a single composite cognitive structure before the conclusion can be asserted. This composite structure is termed 'parāmarśa' by the Naiyāyikas. The structure of 'parāmarśa' takes the following language,—'sādhyavyāpyahetumān pakṣaḥ'. The major premise in a syllogism of Indian logic expresses a bi-terminal relation which is called 'vyāpti' or the relation of pervasion. "All men are mortal" is equivalent to "No men without being mortal". To understand the relation of 'vyāpti' or pervasion, the propositional function, "If x is a man, x is a mortal for all values of x" should be translated into,—"There is no such case as, 'x is a man and x is not mortal' ". In 'parāmarśa' this relation of 'vyāpti' gets integrated with the relation of 'pakṣadharmatā' which is shown by the minor premise in which the probans is predicated of the 'pakṣa' (minor term). Hence 'parāmarśa' is defined by Gaṅgeśa as 'vyāptiviśiṣṭapakṣadharmatājñāna'. 'Parāmarśa' is the knowledge of such a *bi-relational* proposition as in which the relation of 'pakṣadharmatā' is qualified by the relation of 'vyāpti'. It thus expresses a *relation of relations.* Hence the knowledge of this super-relation is called 'viśiṣṭa-vāiśiṣṭyāvagāhijñāna'. In concrete application of values the 'parāmarśa' will stand thus,—[of 'Rama', the minor term, is predicated the middle term 'man' which is pervaded by the major term 'mortal'].

From Uddyotakara onwards this 'parāmarśa', also otherwise called 'tṛtīyaliṅgaparāmarśa', has come down accepted as the immediate cause of the deductive conclusion. A valid knowledge that contradicts 'vyāpti' and thus becomes the knowledge of 'vyāptivyabhicāra', also contradicts the 'parāmarśa' of which 'vyāpti' itself constitutes a part of the object-content. So if the meaning of the word 'anumiti' is extended to include also the immediate cause of inference, 'hetvābhāsa' is freed from the fault of 'avyāpti' or under-extension, because the contradictory valid knowledge is meant to stand as an obstacle directly either to the inferential conclusion or to its immediate cause (parāmarśa).

Now, since taking recourse to a secondary meaning-relation is not a happy method of evading a difficulty, Raghunātha proceeds to a higher total structure of inference, namely, "sādhyavyāpyahetumān pakṣaḥ sādhyavān", which in concrete application of values should take the form, "vahnivyāpyadhūmavān parvato vahnimān",—'Fire' (probandum-sādhya) is predicated of 'mountain' (minor term-pakṣa) of which is predicated 'smoke' (middle term-hetu) that is pervaded by 'fire'. It is clear that this total inference gives us a structure which compresses into itself the syllogism as a whole together with the relational principle on which the deductive syllogism stands. This structure brings out the following super-principle of a syllogism,—when of two terms one is pervaded by the other, if the pervasible term (vyāpya-hetu) is predicated of a subject (minor term) it follows that the pervasive term (vyāpaka-sādhya) can be equally predicated of the same subject. In such a structure as 'sādhyavyāpyahetumān pakṣaḥ sādhyavān' the total inferential knowledge is itself shown to be constituted by the premises and the conclusion, which no longer figure as separate propositions, but as integrated parts of one composite proposition revealing their mutual relations as well.

In this view of the nature of deductive knowledge the conclusion can no longer be looked upon as a detached state-

ment, but it must be taken as a totally integrated structure of which the 'parāmarśa', 'vahnivyāpyadhūmavān parvataḥ', and the traditional conclusion, 'parvato vahnimān', are considered as inseparable constituents. This is technically called 'liṅgopadhāna-pakṣa', or the view that the conclusion, which normally shows the relation between the minor term and the major term, should also better show the relation of the both to the middle term. This view follows as a logical consequence of the concept of 'parāmarśa'. Just as the minor premise and the major premise standing detached from each other cannot lead to the conclusion, so the conclusion too cannot stand as a separate and independent proposition detached from the premises. So the conclusion should show the principle of syllogism to the effect that when a pervasible term (vyāpya) is predicated of a subject the pervasive term (vyāpaka) must be equally predicated of the same subject. The conclusion should provide the concrete application of this principle. Hence the conclusion itself should also show its relation to the middle term. The traditional preface to the conclusion, namely, 'ata eva' or 'therefore' is a pointer in this direction. Thus if the 'parāmarśa' is 'vahnivyāpyadhūmavān parvataḥ' the conclusion should be 'vahnivyāpyadhūmavān parvato vahnimān'.

This logically expanded form of the conclusion follows from the analytical character of the 'hetu' or the middle term. The smoke by itself standing merely as an empirical object is not a *logical hetu*. To make a 'hetu' of a term some logical concept must be imposed on it. The five characteristics of a correct 'hetu' may be condensed into two, 'pakṣadharmatā' and sādhyavyāpyatā'. If we know that smoke is pervaded by fire, the proposition, 'this mountain has smoke', must imply another proposition,—'this mountain has smoke which is pervaded by fire', and the second proposition in its turn must imply a third proposition,—'this mountain having smoke pervaded by fire has fire'. This form of the conclusion does full justice to the logical significance of the middle term and to the meaning of the word 'therefore' prefacing the traditional conclusion.

It is sometimes assumed that Indian logic leans too much on the empirical standpoint. This assumption, we think, is a bit superficial. The proposition 'sādhyavyāpyahetumān pakṣaḥ sādhyavān' is a theoretical statement of the principle of syllogism. The terms, 'sādhya', 'pakṣa' and 'hetu', are purely logical concepts which are only ultimately related to empirical truth. These concepts are constituted by their respective definitions. Before understanding the character of these concepts we cannot substitute them by concrete values such as 'vahni', 'parvata' and 'dhūma', and so cannot say simply empirically that the proposition, 'the mountain has smoke', implies the proposition, 'the mountain has smoke pervaded by fire', which in its turn implies the further proposition, 'the mountain having smoke pervaded by fire has fire'.

The 'pakṣa' is that in relation to which the 'sādhya' is to be established as its predicate. The 'hetu' is that which is pervaded by the 'sādhya'. The 'sādhya' is that which pervades the 'hetu'. Concrete constants like 'parvata', 'dhūma' and 'vahni' can come to replace the conceptual terms, 'pakṣa', 'hetu' and 'sādhya', only so far as they are faithful to the inter-relation among these three concepts. The theoretical statement of the principle 'sādhyavyāpyahetumān pakṣah sādhyavān' is nothing but a statement of the inter-relation of these three terminal concepts. The concrete values can come only in strict obedience to this fundamental principle of syllogistic inter-relation. Thus Indian logic is not *logically empirical*. It is empirical only in the sense that this inter-relation is *finally* to be backed by valid empirical references.

We have already noted that the symbolic statement '$p.q \supset r$' cannot be, in Nyāya view, strictly taken as the structure of the inference, because the conjunctive sign does not go so far as to comprehend 'parāmarśa' in its meaning. The statement, '$p.q \supset r$', at best represents the Mīmāṃsaka and the Advaita view which does not recognise the need of 'parāmarśa' or the further integrated comprehension of the two premises in a single composite proposition. It is according to this view that

mere conjunction of the two premises is enough for the conclusion to follow. Hence to emphasise the need of 'parāmarśa' as logically different from mere conjunction of two premises some new symbolic notation is to be invented.

Sometimes some attempt is made at reducing 'parāmarśa' to a form of transitive relation,—If p implies q and q implies r, then p implies r. This may be symbolically stated as,— $(p \supset q \,.\, q \supset r) \supset (p \supset r)$. Truly speaking, this transitivity involves two Aristotelian syllogisms, such as—

(1) All Prussians are Germans
A is a Prussian
∴ A is a German

(2) All Germans are Europeans
A is a German
∴ A is a European

This can be stated as,—[('A is a Prussian' implies 'A is a German') and ('A is a German' implies 'A is a European')] implies ['A is a Prussian' implies 'A is a European']. Thus this transitive implication, properly speaking, belongs to two syllogisms taken together, and not to one taken singly.

According to the commonly accepted view, in a single syllogism we have the single implication,—'A is a man' implies 'A is mortal', with the pre-supposition of the major premise standing unpronounced at the background,—which may be expressed in the propositional function,—'if x is a man, x is mortal for all values of x'. It is noteworthy that Indian logic recognises this relation of implication in the standard condensed form of the syllogistic statement, 'parvato vahnimān, dhūmāt' (the mountain has fire, because it has smoke), in which 'vyāpti' or major premise does not appear directly, but operates as an undeclared pre-supposition. Now in 'liṅgopadhānapakṣa' we can attempt to show how a transitive implication is involved even in a single syllogism. 'A has B' (i.e. p) implies,—'A has B pervaded by C' (i.e. q), which implies—,'A having B pervaded by C has C' (i.e. r). This can be translated into the form,—('$p \supset q$' . '$q \supset r$') $\supset (p \supset r)$. In 'liṅgopadhānapakṣa' 'r' as a true proposition

should be translated into the inferential conclusion,—'vahni-vyāpyadhūmavān parvato vahnimān', and not into the simple detached proposition, 'parvato vahnimān'. In this sense, by presenting the principle of 'liṅgopadhānapakṣa',—'sādhya-vyāpyahetumān pakṣaḥ sādhyavān', Raghunātha has really unfolded the principle of transitive implication involved in a syllogism.

Among the modern logicians Bradley and Cook-Wilson has recognised the necessity of such a complex judgment as the Naiyāyikas call 'parāmarśa' to intervene between the premises and the conclusion. It is not enough to combine the premises or put them together. "What is right, however, is the recognition that some act of unification is required". Prof. Cook-Wilson continues,—"Suppose we start with the minor premise, 'All A is M', and the act of thought by which we apprehend that premise does not by hypothesis contain the apprehension that M-ness involves B-ness, or that all M is B, Suppose next that we apprehend this latter, the major premise. We now substitute in the minor the information which we have about M in the major, so that 'A is M' gives way to 'A is M B'. This provides us with the so-called conclusion". (Statement and Inference, Vol. II, pp. 450-452. Also see Bradley's Logic Vol. II, Pt. I).

Section II

MEANING OF 'YATHĀRTHA'

Now we come to the meaning of the term 'yathārtha' in the definition. There may be some cases in which even a valid inference stands handicapped by a false contradiction which may be entertained without apprehending its falsity. Suppose somebody somehow happens to entertain a false proposition,—'This mountain has no fire'. This is an obstacle to the correct conclusion,—'This mountain has fire'. If we omit the word

'yathārtha' in the definition, even this valid conclusion will be in danger of being pronounced invalid and the middle term will be fallacious, since there is a contradictory proposition which stifles the conclusion. To avert this danger the word 'yathārtha' has been deliberately inserted in the definition. The so-called contradictory proposition does not constitute a real contradiction because it is not an object of valid knowledge. The import of the word 'yathārtha' lies in this that,—to constitute a fallacy it is not enough that an inference is psychologically or epistemically inhibited, but it must be 'logically' inhibited. For him who entertains a false contradiction a correct inference suffers from epistemic handicap, but not from 'logical' inhibition. It is the very nature of human knowledge that two contradictory predicates cannot be asserted of the same subject in a single assertive propositional judgment. To become a logical inhibition the contradiction must be valid, and not that someone simply takes it to be valid. It is needless to say that here the logical validity of the contradictory proposition is to be determined by its correspondence to fact.

Even then the word 'yathārtha' entails difficulty from another angle. We may falsely entertain the proposition,—'The mountain has no fire'. The point is whether our knowledge in this respect is totally false. One may argue that the object-content of my knowledge has two parts, the subject and the predicate, which may be split into two implied propositional judgments—'this is a mountain' and 'this has no fire'. The falsity refers to the predicate or to the second proposition, and not to the first. If the total judgment, 'this mountain has no fire', is looked upon as a condensation of the two judgments shown above, we cannot pronounce it to be totally false, because the part of it represented by the subject (which implies the partial judgment, 'this is a mountain') is definitely valid, while the other part is false. When a predicative judgment is viewed from such a possibility of split, the word 'yathārtha' does not serve the avowed purpose, for even a false contradiction turns out to be partially true.

Jagadīśa tries to obviate the difficulty by defining 'yathārtha' as,—'bhramasāmānyabhinna'. He says,—"yathārthapadena bhramasāmānya-bhinnatvasya vivakṣitatvāt" (A.C.J. p. 1007). This means,—by 'yathārtha' or valid knowledge we intend to take the total knowledge which is totally different from false knowledge. The word 'sāmānya' in Jagadīśa's interpretation is to be taken in the modern logical sense of the logical word 'any,' i.e., we mean such a total knowledge as is devoid of, or, different from any false knowledge. Hence the knowledge that the mountain has no fire, being false in its predicational aspect, is not totally different from false knowledge. The idea operating behind Jagadīśa's observation appears to be this :—We are not entitled to break the proposition, 'the mountain has no fire', into a combination of two propositions, namely, 'it is a mountain' and 'it has no fire'. The combination contains a double predication. Mountain is predicated of an 'it'. and absence of fire is also predicated of the same 'it'. But our proposition under consideration is one of single predication, and this predication is false. This means that absence of fire cannot be truly predicated of the mountain. The corresponding judgment is also a single judgment with a single predication. If the predication is false the whole judgment is invalid.

Those who speak of the partial validity of a false propotion has something like this in their mind :—A person with jaundiced eyes makes the following judgment,—'the conch-shell is yellow'. The falsity is not here in respect of the substantive subject (uddeśya-viśeṣya), but in respect of the predicative adjective. Even a jaundiced eye takes the conch-shell rightly to be as such, but wrongly only as yellow. Thus the same judgment may be characterised both as partially valid and partially invalid. This can be understood if the proposition 'this conch-shell is yellow', is substituted by the proposition, 'this is a yellow conch-shell'. Here both the substantive subject and the predicative adjective of the former proposition are relegated to the position of a composite predicate in respect of which our knowledge is partly valid and

partly invalid. The Naiyāyikas generally do not accept this view of half-truth and half-falsehood in a predicative judgment. Yet, granted that such a view may be somehow entertained by somebody, Jagadīśa wants to plug the lacuna by his definition of validity as 'bhramasāmānyabhinnatva'. This consideration may be applied also to such a composite false judgment as,—'The lake and the mountain have no fire'.

This concept of 'bhramasāmānyabhinnatva', appears to be more technically developed by Gadādhara in the following way :—

"yathārthapadadānena sva-vyadhikaraṇa-prakārāvacchinnā yā yā viṣayatā tattadanirūpakatvarūpasya sarvāṃśe pramātvasya vivakṣaṇiyatyā darśitabhramāṇāṃ kincidaṃśe pramātve'pi na tānādaya doṣa iti bhāvaḥ" (A. C. G. p. 1587)

Out of this whole passage the relevant definition of 'yathārthatva' (validity) may be picked up as follows :—

"sva-vyadhikaraṇa-prakārāvacchinnā yā yā viṣayatā tattadanirūpakatvaṁ yathārthatvam."

The object-content of knowledge is called 'viṣaya'. So its logico-epistemic character of being a 'viṣaya' is called 'viṣayatā'. Knowledge in relation to its object is called 'viṣayin', and so the logico-epistemic character of being a 'viṣayin' is called 'viṣayitā.' Let us translate the term 'viṣayitā' as 'subject-ness' and 'viṣayatā' as 'object-ness'. So the subject-object relation is called 'viṣaya-viṣayisambandha.' The terms, 'viṣaya' and 'viṣayin', and also 'viṣayatā' and 'viṣayitā' are thus logical correlates. This correlation belongs to a class of logical relations which may be termed the relation of co-determinability or 'nirūpya-nirūpakasambandha,' in which the terms appear as reciprocal determinants and determinables. This nirūpya-'nirūpakasambandha' is a relation of higher type or second-order logical relation under which 'viṣaya-viṣayitāsambandha' or the subject-object relation is comprehended as an instance.

With these remarks for terminological clarification we may now proceed to analyse the definition of valid knowledge.

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proposed by Gadādhara in the context of 'hetvābhāsa'. Someone falsely asserts that the mountain has no fire. This propositional judgment contradicts the valid judgment, 'the mountain has fire'. We have seen before how even a false contradiction may be held to be partially valid and how the adequacy of the word 'yathārtha' in the definition of 'hetvābhāsa' can be questioned. The proposition, 'the mountain has no fire', may be re-stated in the form,—'the mountain is characterised by the absence of fire (vahnyabhāvaviśiṣṭaḥ parvataḥ). It is now clear that the mountain is here assumed to have two properties, namely, 'the absence of fire' and 'mountain-ness' (vahnyabhāva and parvatatva). On our admission the former is a false property in the sense of its being falsely predicated, and the latter is a true one in the sense of its truly belonging to the subject. Mountain as the subject of the proposition is the logical substantive (viśeṣya), while mountain-ness is the logical adjective (viśesaṇa) of mountain. As an object-content (viṣaya) appearing in the cognitive structure this viśeṣaṇa is called 'prakāra'. Thus 'mountain-ness' figures as the 'prakāra' belonging to mountain which behaves as the substantive object-constituent of knowledge. Again the mountain has also the property of 'being an object of knowledge' (viṣayatā). The two properties, mountain-ness (parvatatva) and 'visayatā' are thus compresents or co-locatives belonging to the same locus or 'adhikaraṇa', i.e., mountain. 'Viṣayatā' is a wider concept than 'parvatatva'. 'Viṣayatā' belongs to all possible or actual objects of knowledge, while 'parvatatva' belongs to 'parvata' alone. In this relation of compresence or co-locativity (sāmānādhikaraṇya) 'viṣayatā' (same as 'viṣayatva') is limited by 'parvatatva', because it is logically abstracted away from other objects of knowledge and is fixed in 'parvata' alone by the logical property called 'parvatatva'. Within this structure of co-locativity that which limits is called 'avacchedaka' or limitor, and that which is limited is called 'avacchinna'. Thus 'parvatatva' is the limitor, and 'viṣayatā' is the limited. The latter limited as such and the former have the relation of compresence, having equality in scope with each other.

In the proposition, 'M – F' (to be read as 'mountain has no fire') the mountain is not really the locus of – F or absence of fire. So 'Mness' and – F are not really co-locatives, but counter-locatives (vyadhikaraṇa). Now we may say that in the prospositional knowledge of 'M – F' the objectness belonging to M is limited by Mness to which, however, – F, though counter-locative in reality, appears as co-locative in knowledge, figuring as a predicative property (vidheya-prakāra) limiting the same 'viṣayatā' that is limited by Mness.

In Navya-Nyāya terminology we express this as,—'vahnyabhāvavyadhikaraṇa-parvatatvāvacchinnaviṣayatā'. It has already been stated before that subject or 'viṣayin' involves a relation to the object or 'viṣaya'. Hence subject-ness (viṣayitā) determines object-ness (viṣayatā) and vice versa. The correlativity of subject-ness and object-ness is the relation of co-determinancy or co-determinability which is the logical consequence of mutual co-apprehensibility. In the invalid knowledge under consideration 'viṣayitā' appears as the determinant of such a 'viṣayatā' as is limited by 'Mness' which is counter-locative to – F falsely appearing as the predicative adjective of M. Let the character of being a determinant be called determinance (nirūpakatva). We may now define invalidity of knowledge in this way :—

That knowledge is invalid which has the relation of being the determinant (determinance-nirūpakatva) of any such objectness as is limited (avacchinna) by an adjectival property (prakāra) that is counter-locative (vyadhikaraṇa) to the assumed predicate. This definition in Sanskrit would run as follows :—

"sva-vyadhikaraṇa-prakārāvacchinnā yā yā viṣayatā tattannirūpakatvam ayathārthatvam"

The term 'sva' stands for any falsely predicative property. In our proposition, 'M – F' 'sva' refers to – F which is 'sādhyābhāva' or absence of the predicative probandum in the valid original inferential conclusion, 'M F'. The definition of invalidity may be finally stated as follows :—

That propositional knowledge is invalid in which the

subject-ness belonging to knowledge appears as the determinant of an object-ness which is limited by such a property of the object (i.e., M-ness in our concrete case) as is counter-locative to the propositional predicate (i.e. – F in the concrete case).

Now it is easy to define valid knowledge :—That propositional knowledge is valid in which the subjectness is *not-determinant* of such an object-ness as has been characterised in the above definition of invalid knowledge. But there is a simpler way of interpreting Gadādhara's definition of validity. We may take the term 'sva', with which the definition starts, as standing for 'viṣayatā' or object-ness which is here the same as substantivity (viśeṣyatā) belonging to the subject-substantive (uddeśya-viśeṣya) mountain. As to the relation of limitation (avacchedya-avacchedaka-sambandha) there is a general rule that the limitor (avacchedaka) and the limitable (avacchedya) must belong to the same locus, i.e., they must be 'samānādhikaraṇa' or co-locatives. Only when two logical properties belong to the same locus, the one represented by the wider term is limited by the other represented by the narrower term. Fire is the cause of smoke. Fire has the property of causality, or better say, 'cause-ness' (kāraṇatā). This cause-ness is limited by the property 'fire-ness' which belongs to the same locus 'fire' as to which cause-ness belongs. Hence a logical property that would limit 'viṣayatā' must belong to the same 'viṣaya' as to which 'viṣayatā' belongs. A violation of this rule would entail invalidity of knowledge. Suppose a piece of nacre is taken as a piece of silver in the form of the false judgment, 'this is silver'. Since the object demonstrated by 'this' is taken as silver, the 'viṣayatā' belonging to 'this' appears in knowledge as being limited by silver-ness (rajatatva) which as a limiting property (avacchedaka prakāra) does not really belong to the same locus 'this'. Thus silver-ness is factually counter-locative to object-ness or substantivity belonging to 'this'. But we have seen before that the relation of limitation requires co-location or compresence of the limitor and the limitable. In the case of a false proposition or invalid knowledge this rule of limitation is violated. So we can say that a propositional

knowledge is invalid when two properties, which are counter-locatives in fact, appear as co-locatives, the limitor and the limited, in the same knowledge. We may now apply this definition to the invalid propositional knowledge 'M – F'. Here in knowledge M appears as qualified by the 'prakāra', the predicate – F, which in fact does not belong to M. So *in fact* the 'viṣayatā' or 'viśeṣyatā' belonging to the mountain is counter-locative to – F which *in knowledge* seems to be the predicative 'prakāra' limiting the 'viṣayatā' belonging to M. According to this second interpretation invalid knowledge may be finally defined as :—Invalid knowledge is that knowledge which determines such a 'viṣayatā' as is limited by a 'prakāra' that is factually counter-locative to the said 'viṣayatā'. Hence valid knowledge *is other than that which determines* such a 'viṣayatā' as is characterised above. Thus Gadādhara's definition of validity hinges upon the notion of non-determinance (anirūpakatva) or absence of such a determinance as is found in false knowledge. In this way validity comes to mean total validity, and only partial validity does not make a knowledge valid. It may be easily shown that this exacting definition of validity is not at all satisfied by such propositional judgments as,—'The lake and the mountain have fire' or 'the lake has both fire and water'. Henc the term'yathārtha' in the first definition of 'hetvābhāsa' is necessary to eliminate the case of a false contradiction of a correct inference.

It is to be noted that Gadādhara's definition of totally veridical knowledge is really derived from Gaṅgeśa himself. Along with many other possible definitions Gaṅgeśa suggests the following two definitions respectively of pramā (valid knowledge) and apramā (invalid knowledge) :—

(1) viṣayatā - samānādhikaraṇātyantābhāva - pratiyogi - prakāraka - viṣayatvāpratiyogī anubhavaḥ pramā.

(2) sva-vyadhikaraṇaprakārāvacchinna - viṣayatvapratiy-ogi jñānaṃ bhramaḥ.

(T.C. Prāmāṇyavāda pp. 419-21 Bibliotheca Indica)

In the first definition the portion 'viṣayatā......prakāra'

means such a counter-correlate 'prakāra' as of which the absence is co-locative with 'viṣayatā', i.e., 'prakāra' and 'viṣayatā' do not really belong to the same locus, which means that 'prakāra' is counter-locative (vyadhikaraṇa) to 'viṣayatā'. Hence this portion in the first definition means the same as 'sva-vyadhikaraṇa-prakāra' in the second definition. The word 'pratiyogi' before 'anubhavaḥ' in the first definition and before 'jñānam' in the second definition stand for 'determinant' (nirūpaka). Hence 'viṣayatva-pratiyogi' (second definition) means 'determinant of viṣayatva' (viṣayatā and viṣayatva mean the same), and 'viṣa-yatvāpratiyogi' (first definition—viṣayatva-*a*pratiyogi) means 'non-determinant of viṣayatva'. 'prakāraka-viṣayatva' in the first definition is the same as 'prakārāvacchinna viṣayatva' in the second definition, i.e., 'viṣayatva' limited by 'prakāra'.

Mathurānātha explains that the negative particle *a* in *a*pratiyogī (viṣayatva-*a*pratiyogī in the first definition) means negation in the sense of 'different from'. Hence the first definition (i.e., of pramā) means :—

"Valid knowledge is that which is different from *whatever* knowledge that is determinant of such a 'viṣayatva' as is counter-locative to a 'prakāra' figuring as a limitor of the same 'viṣayatva' in the same knowledge"

["......viṣayatā-pratiyogi yad yat *tadanyānubhavaḥ*, atra *sarvāṃśa*-pramaiva lakṣyā, tena āṃśikapramāyāṃ nāvyāptiḥ"—Mathurānātha]

Here Mathurānātha clearly states that this definition is meant for a totally veridical knowledge, not for any partially valid knowledge. In short, in any totally valid knowledge the 'viṣayatā' must remain untouched (non-limited) by a non-colocative (vyadhikaraṇa) 'prakāra'. The same meaning has been sought to be brought out by Gadādhara by transferring the adjective 'any' or 'whatever' from knowledge to 'viṣayatā'. Thus Gadādhara's definition comes to mean the same thing in a slightly different language :— Valid knowledge is that which is non-determinant of *any* 'viṣayatā' such as is limited by a 'prakāra' which is (factually) counter-locative to

the said 'viṣayatā'. This sense of *any* or *whatever* has been sought to be emphasised by Mathurānātha and Gadādhara through the double application of the pronominal adjective 'yat'. Thus Mathurānātha says :— '*yad yat* tadanyānubhavaḥ', and Gadādhara says :—'*yā yā* viṣayatā tadanirūpakaṃ jñānam'. The result is the same.

This sense of *any* or *whatever* involved in the definition is very significant. If we omit this sense, one false knowledge, by definition, becomes valid in relation to another false knowledge. Let us have two invalid judgments :—"This is silver" (in respect of nacre), and "This is a snake" (in respect of a rope). Here each knowledge involves a 'viṣayatā' limited by a non-co-locative 'prakāra'. But one knowledge is not determinant of 'viṣayatā' involved in another knowledge. So if we simply say :—"valid knowledge is that which is not determinant of 'viṣayatā' limited by a 'vyadhikaraṇa prakāra' ", then one false knowledge, being non-determinant of 'viṣayatā' involved in another false knowledge, becomes valid in relation to the other. This fault of over-extension is sought to be removed by attaching the sense of *any* or *whatever* either to knowledge or to 'viṣayatā'. When we say :—"Valid knowledge is that which is non-determinant of *any* such 'viṣayatā' etc., or, which is *different* from *whatever* knowledge that is determinant of such a 'viṣayatā' etc"., the fault is no longer there, because each false knowledge is the determinant of such a 'viṣayatā' as is limited by a 'vyadhikaraṇa prakāra' in relation to itself. From this definition of valid knowledge it follows by implication that any knowledge involving such a 'viṣayatā' is false. Knowledge that is non-determinant of any 'viṣayatā' which is limited by a 'vyadhikaraṇa prakāra' is equivalent to knowledge that is different from whatever knowledge which is determinant of such a 'viṣayatā'.

Let VK stand for valid knowledge, K for knowledge, 'd' for determinance, 'v' for viṣayatā, 'l' for limitation, '–cl' for non-colocative (i.e counter-locative, vyadhikaraṇa) and 'p' for prakāra. Then :—

$$VK \equiv -[K\ d\{v\ l(-cl\ p)\}], \text{ i.e,}$$

Knowledge is valid, if and only if, it is different from whatever knowledge that is determinant of a 'viṣayatā' which is limited by a non-colocative 'prakāra'. It follows by further implication that the portion within the third brackets represents invalid knowledge.

Section—III

THE SECOND DEFINITION

This discourse on the necessity of the term 'yathārtha' in the first definition paves the way for the second definition which omits this controversial term without doing any damage to the intended meaning and adequate concept of 'hetvābhāsa'. The second definition runs as follows :—

> "yadviṣayakatvena liṅgajñānasya anumitivirodhitvaṃ tattvaṃ hetvābhāsatvam" (A.C.G. p. 1580)

The first definition presents a difficulty from another direction. The inferential knowledge, 'the lake has fire', is accepted to be false, because it is contradicted by such an accepted valid knowledge as 'the lake has absence of fire'. Now in the total object-content of the contradictory valid knowledge, namely, 'the lake having absence of fire', there are some constituents, namely, 'lake' and 'absence of fire', which also figure as the objects of the same valid knowledge. In short, the parts of the total object-content are also as much objects of the same knowledge as the totality itself. So the first definition of 'hetvābhāsa' may be unduly extended to the constituent parts of the total object taken separately. Thus 'the lake' or 'the absence of fire', by themselves becoming objects of the same valid knowledge, also may come to be treated as 'hetvābhāsas' or fautls of the middle term in relation to the inference concerned. In other words, if the total propositional knowledge of 'the lake having absence of fire' determines the falsity of the inference, each of the parts thereof, 'the lake' and 'absence of

fire', also becomes 'hetvābhāsa' being constitutive of the same determinant of falsity. Raghunātha poses this objection in the following language :—

"nanu pratibandhaka-jñānaviṣaya-vyabhicārādighaṭakasādhyāderapi pratyekaṃ hetvābhāsatāpattiḥ"
(Ibid. p. 1585)

Raghunātha himself shows the way to counter this objection. The fault of an inference is constituted by a contradictory valid knowledge. We have to consider what kind of object-content is required by a valid knowledge in order to become a contradiction and obstacle to inference. Only the total knowledge determined by the total content, i.e., 'the lake being qualified by the absence of fire', constitutes the contradiction, The knowledge of the constituent parts as such, 'fire', 'absence of fire' and 'lake', does not provide this contradiction. Hence the definition does not extend to the constituent parts. This has been pointedly expressed by Raghunātha :—

"viśiṣṭaviṣayakaṃ jñānaṃ pratibandhakam, tadghaṭakaṃ ca na viśiṣṭam" (Ibid.)

The obstacle is the knowledge of the qualified (the object-substantive as being qualified), and a constituent part is not the qualified whole which expresses the relation between the subject and the predicate. In our particular illustration the object of contradictory knowledge is the total proposition, 'the lake has absence of fire'. The parts thereof do not by themselves, taken separately, stand as 'the qualified', because they by themselves do not constitute the total relation. The parts may figure as objects of some other knowledge which does not contradict the inference. For example, the knowledge 'this mountain has fire' or 'this house has absence of fire' does not stand as a contradiction to the knowledge, 'the lake has fire'. 'Fire' or 'absence of fire' is a part of these propositions without in any way being related to contradiction. To become a real obstacle to an inference the contradictory knowledge invariably requires an object-content which must not figure

in a knowledge that is not an obstacle to the inference in question. Technically this may be expressed thus,—in a valid contradictory knowledge, 'having something as the object' (viṣayitā) should not be wider in scope than 'being an obstacle to the inference'. This condition is palpably fulfilled only by the total object represented by the total proposition, 'the lake is qualified by absence of fire', and not by the fragmentary objects such as 'lake', 'fire', and 'absence of fire', which may belong to some other non-contradictory propositional knowledge also. Hence Gadādhara remarks :—

> "yādṛśaviśiṣṭaviṣayakatvaṃ tādṛśānumitivirodhitvānatiriktavṛtti tattvam......pratyekapadārthaviṣayakatvasya pratibandhakatāyā atirikta-vṛttitvāt nātivyāptiḥ" (Ibid. p. 1587)

Now Raghunātha proceeds to show that, as a logical consequence of this argument against fragmentary objectivity determining a 'hetvābhāsa', the term 'yathārtha' in the first definition turns out to be redundant. In the falsely entertained contradiction that 'the mountain has absence of fire', partial knowledge of the mountain 'as the mountain', though valid, does not constitute the contradiction. So the first definition of 'hetvābhāsa' does not extend to this partial objectivity (khaṇḍaviṣayatā). The totality of this false knowledge determined by the totality of the propositional object is an actual obstacle to the inference. But one may then argue,—the term 'yathārtha' is still necessary in the definition to prevent its over-extension to the object of false knowledge. To this Raghunātha replies :—When we say 'viśiṣṭaviṣayakaṃ jñānaṃ pratibandhakam', the purpose of the term 'yathārtha' is already served by the term 'viśiṣṭa'. If 'the mountain having fire' is accepted in knowledge by somebody as 'the mountain having absence of fire', the false predication does not, *in fact*, qualify the subject. What is assumedly qualified is not objectively qualified as such. The predicational qualification is non-established (aprasiddha) in the realm of real objects. The term 'viśiṣṭa' itself should be taken as referring to an established fact

(prasiddha) represented by a corresponding true proposition. Hence Raghunātha observes, Gaṅgeśa feels the need of passing to the second definition.—

> [yathārtheti vyartham, bhramaviṣayavśiṣṭasya aprasiddhatvāt, ityāśayena āha yaditi—Ibid p. 1586]

The second definition may be translated as follows :—'Being the fault of the middle term is being such an object of knowledge as by virtue of which the same knowledge constitutes the contradiction of the inference'. In this definition, as it has been observed by Raghunātha, the expression 'liṅga' or the middle term, is unnecessary, since the fact that such knowledge encompasses the middle term is quite apparent, for we are obviously dealing with 'hetvābhāsa' or fallacy of the middle term. In 'vyabhicāra' or violation of the inductive generalisation (major premise) the contradictory knowledge directly touches the middle term, while in bādha or direct contradiction of the inferential conclusion the middle term is involved indirectly by implication. The inferential knowledge that 'the lake has fire' is contradicted by the valid knowledge that 'the lake has absence of fire'. The fault is constituted by the objectness belonging to the total object of this contradictory knowledge. That there is such an object of knowledge (in the world of facts) which stands in contradiction to the inference is the root of the fault vitiating the middle term which is incapacitated in its function verily by the same contradiction.

To define the fault, as we have already seen, the total object of the total knowledge is to be kept in view. So Raghunātha explains 'yadviṣayakatvena' in the second definition as 'yādṛśaviśiṣṭaviṣayakatvena'. Here Raghunātha has resorted to the concept of 'avacchedakatva' or the relation of limitation. The introduction of this relation is necessary for interpreting the sense of totality of the object-content that we have mentioned above. What sort of an object the contradictory knowledge should require in order to become a real contradiction ? This is the problem. So the logical nature of such an object should be precisely defined. Let us take two proposi-

tions—'the lake has fire' and 'the lake has absence of fire'. The former is false and the latter true. To define the total object-content of the knowledge of the latter which validly contradicts the former we may express the specific logical position in this way.—The objectness (viṣayatā), determining the subject-ness (viṣayitā) of the contradictory knowledge, is limited by '(fire's-absence-qualifying-lake)ness', or '(vahnyabhāva-viśiṣṭa-hrada)tva'. The suffix 'ness' or 'tva', which indicates 'having some property' in general, has been put outside the enclosure in order to specify the total concrete object-content of thought. This qualified lake-ness is different from pure lake-ness or 'śuddhahradatva'. The contradictoriness (virodhitva or pratibandhakatva) of the knowledge is its (knowledge) 'being determined by such a qualified object'. This total qualificatory property may be expressed as '(vahnyabhāva-viśiṣṭa-hrada) tvāvacchinna-viṣayakatva' which is equivalent to contradictoriness fixed in a specific proposition. Thus '(vahnyabhāva-viśiṣṭa-hrada)tva' is the limitor of such a 'viṣayakatva' as suffices for the contradiction.

Now the knowledge of 'the lake being qualified by absence of fire' no doubt encompasses as its objects 'lake' 'fire' and 'absence of fire'. From psychological standpoint, here the knowledge of the fragmentary objects and the knowledge of the total object-content are one and the same. But there is a logical distinction between the two. Knowledge of the fragments or the separate terms of the proposition is not determined by an objectness which is limited by '(vahnya-bhāvaviśiṣṭa-hrada)tva'. The knowledge of the lake is logically determined by an objectness which is limited by lake-ness,—'hradatvāvacchinnaviṣayatā-nirūpitaṃ hradajñānam'. Similar considerations apply, *mutatis mutandis*, to the knowledge of fire or absence of fire. Since by definition the contradictoriness belongs to the total propositional knowledge, the limiting property that limits the contradictoriness by fixing it to the specific case must take into consideration the structure of the proposition as a whole. So, as a first step of limitation, we may say that '(vahnyabhāvaviśiṣṭahrada)tva' limits the 'viṣayakatva' belong-

ing to the contradictory knowledge. As a second step of limitation the 'viṣayakatva' limited as such becomes in its turn the limitor of contradictoriness. So we say '[(vahnyabhāva-viśiṣṭahrada)tvāvacchinna-viṣayakatv]āvacchinnaṃ pratibandhakatvaṃ'. Thus to get precisely the full concept of contradictoriness we require a hierarchy of two-tier limitation. This particular 'viṣayaktva', which is limited as such and by virtue of which the particular knowledge contradicts the particular inference, limits the contradictoriness to *this* particular knowledge alone. Here the logical concept of 'viṣayakatva' stands at the border between the limitor and the limitable. On the one hand it is itself limited by (vahnyabhāvaviśiṣṭahrada)tva, and on the other it becomes the limitor of contradictoriness. Thus finally contradictoriness is defined with the help of a two-tier limitation which becomes necessary for taking into account the total structure of the contradictory propositional knowledge. Let us now define the total object-structure as, '[(vahnyabhāvaviśiṣṭahrada)tvāvacchinna]viṣayatāviśiṣṭa' which is equivalent to 'vahanyabhāvaviśiṣṭahrada', or, 'the lake qualified by absence of fire' which constitutes the fault of the inference, and so of the middle term. The final statement of the 'hetudoṣa' in this particular context would now stand as follows :—

[{(vahnyabhāvaviśiṣṭahrada)tvāvacchinnaviṣayatānirūpita-viṣayitā }avacchinnapratibandhakatā]viśiṣṭajñānaviṣaya - hradaḥ hetudoṣaḥ.

The exact literal translation in English will take this extraordinary form :—

[{ (Vahni-abhava-viśiṣṭa-hrada)tva-avacchinna-viṣayatā-nirū-
[{(Fire's-absence - qualifying - lakeness) limiting-objectness-

pita - viṣayitā} avacchinna - pratibandhakatā - visiṣta - jñānasya -
determining-subjectness} limiting-contradictoriness-qualifying-

viṣayaḥ-hradaḥ hetudoṣaḥ.]
knowledge's-object-lake=fault of the middle term.]

If we have understood the matter the expression will not sound so cumbrous as it seems, since it runs closely parallel

to the corresponding Sanskrit expression. The difficulty lies in the fact that the rules of forming Sanskrit compounds have some advantage which is lacking in English. The enclosures signify that there is a hierarchy of complexes in which one complex is subsumed under a higher complex which is again under a still higher complex ; and this goes on till we get a grand total complex which is required by the definition. Sanskrit compound-expressions together with modern method of enclosure may give us an understandable definition or statement of a complex concept. Thus the suffix 'ness' being attached to the first enclosure stands for a logical property belonging to the first complex. Hence it may be understood that the property does not belong to the pure 'lake' alone, but to the lake caught in the complex whole enclosed as such. This brings out the logical distinction between 'śuddhahradatva and 'viśiṣṭahradatva'. Though a blue lotus is not objectively dlfferent from the unqualified pure lotus (viśiṣṭaasya anatirekaḥ), yet the property of being a blue lotus or '(blue-lotus)ness' is logically different from the simple property of being a lotus or lotusness. The hierarchy of complexes in the definition follows from the primary distinction between the two logical properties.

We have seen that the knowledge which has for its object 'the lake qualified by absence of fire' has also for its objects 'lake' and 'absence of fire'. But the knowledge determined by these separate object-constituents do not constitute the contradiction. Yet psychologically it is the same knowledge which has both the whole and the parts standing as its objects. So it happens that 'having for its object (viṣayakatva) the lake qualified by absence of fire', or, 'vhanyabhāvaviśiṣṭahradaviṣayakatva', which is intended to be the contradictory property of knowledge, also includes in its fold 'hradaviṣayakatva' and 'vahnyabhāva-viṣayakatva', which, however, are not considered to be contradictory properties. Thus it is an absurd position that a total contradictory property of knowledge is constituted of non-contradictory properties. In that case the very contradictory character of the intended total property is called into question. The concept of 'hetvābhāsa' hinges upon the very

contradictoriness of a valid knowledge. So a definition of 'hetvabhāsa', in which this contradictory character is in question and remains undefined, cannot be a proper definition. It is for this very reason that the logical concepts of limitation and of a hierarchy of limitation have got to be introduced. We cannot skip over the first limitation and directly reach over to the second. When we say '(vahnyabhāvaviśiṣṭahrada)tvāvacchinna-viṣayatva' we at once make a logical distinction between the property of objectness belonging to the complex whole i.e., '(fire's absence-qualifying-lake)ness' and the properties of objectness belonging to the fragmentary constituents, 'lake' and 'absence of fire'. 'Vahnyabhāvaviśiṣṭahrada' may have for its constituents 'hrada' and 'vahnyabhāva', but '(vahnyabhāvaviśiṣṭahrada)tva' or '(fire's-absence-qualifying-lake)ness' as a distinctive logical property is not constituted of 'hradatva' or lakeness and 'vahnyabhāvatva' or '(fire's-absence)ness'. Hence it follows that the objectness limited by this complex whole of logical property is not logically the same as objectness limited by 'hradatva' or 'vahnybhāvatva'. Thus in the psychologically same structure of knowledge the concept of limitation is made to operate in order to bring out the logical distinction between the objectness as is limited by a complex logical property and the objectness as is limited by a simpler logical property. Hence for the purpose of standing as a contradiction, the contradictoriness of the knowledge must be limited by the 'viṣayakatva' (the property of having an object) which in its turn should be limited by the complex whole of a logical property, i.e., '(vahnyabhāvaviśṭahrada)tva', in contradistinction to pure 'hradatva' or 'vahnyabhāvatva'. So it is not possible to dispense with the concept of limitation, or to skip over the lower-plane limitation and try to reach the higher-plane limitation by a single leap. That is the secret of defining 'hetvābhāsa' in the concrete instance under consideration as :—

[{(vahnyabhāvaviśiṣṭahrada)tva - avacchinna - viṣayakatva} - avacchinna-pratibandhakatva]viśiṣṭa-jñānaviṣaya-hradah.

This has already been explianed before with a closely

parallel literal translation. 'Viṣayakatva' is only a shorter logical expression for 'viṣayatānirūpitaviṣayitva'.

The concept of 'avacchedakatva' or the character of being a limiting property, in this particular context, has been interpreted by Raghunātha as 'anatiriktavṛttitva'. A limiting property should not belong to a locus beyond that wherein the limitable does exist.

This logical element received our partial attention in the first section. We should develop it further to understand its full implication. In the absence of a pitcher, the pitcher is the counter-correlative (pratiyogin) of this absence and is thus the locus of counter-correlativity (pratiyogitā). Pitcher-ness or 'ghaṭatva' is the limiting property (avacchedakadharma) which limits 'pratiyogitā' to pitcher alone, and delimits it from other possible counter-correlative objects such as cloth and the like. 'Dravyatva' or substantive-ness also belongs to the pitcher, since it is a substance. Yet 'dravyatva' is not to be considered a limitor limiting 'pratiyogitā' belonging to 'ghaṭa', because 'dravyatva' also belongs to any other substance which does not possess this 'pratiyogitā' belonging to the pitcher. So 'dravyatva' is not the limitor, for it also exists beyond the limitable 'pratiyogitā'. It is thus 'pratiyogitā-atiriktavṛtti'. But 'ghaṭatva' does not transcend the 'pratiyogitā' possessed by 'ghaṭa', i.e., does not over-extend to other objects where this 'pratiyogitā' (as determined by the absence of 'ghaṭa') does not exist; and as such 'ghaṭatva' operates as the limiting property by which 'pratiyogitā' is limited to 'ghaṭa' alone.

Let us now apply this concept of limiting property to the concrete case under consideration. The knowledge that has for its object, 'the lake qualified by the absence of fire' has also the pure lake (śuddhahrada) for its object. Hence 'vahnyabhāva-viśiṣṭahradaviṣayakatva' is also 'śuddhahradaviṣayakatva', just as a blue lotus is also a lotus. Now we say that 'vahnyabhāvaviśiṣṭa-hradaviṣayakajñāna' is the contradictory knowledge and that the object of such knowledge is 'bādha hetvābhāsa'. In that case the pure 'hrada' which is also a

constituent object of the same knowledge also becomes a 'hetvābhāsa', which is, however, not the case, because the knowledge of 'hrada' alone is not accepted as the contradictory knowledge. Thus 'vahnyabhāvaviśiṣṭa-hradaviṣayakatva' cannot be the limiting property intended to limit the contradictoriness (pratibandhakatāvacchedaka), since this property extends or percolates to the knowledge of the pure lake (standing as a fragment of the total object-content) wherein the contradictoriness does not exist. Thus 'vahnyabhāva-viśiṣṭa-hradaviṣayakatva' is 'atiriktavṛtti', because it extends beyond the limitable contradictoriness (which belongs to the knowledge in its totality) to the knowledge of the constituents which is not contradictory.

But if we retain the lower limitation such as, '(vahnyabhāvaviśiṣṭahrada)tva-avacchinna-viṣayakatva,' the higher limitation, expressed in the contradictoriness being limited by such a 'viṣyakatva' as characterised above, at once achieves its purpose by limiting contradictoriness to the knowledge of the total complex. The higher limitation, being based on the lower limitation, finally gives us such a 'viṣayakatva' (i.e., viṣayatānirūpitaviṣayitva) as logically demarcates the complex object-content, 'vahnyabhāvaviśiṣṭahrada', figuring in the contradictory knowledge, from the partial or constituent object-contents of the same knowledge. In this way within the same complex structure of a propositional knowledge we are able to make a logical distinction between the whole object-content figuring as the propositional totality and the partial constituent object-contents figuring as the terms of the proposition. This deeper implication of the concept of limitation and of the interpretation of the limiting property as 'anatiriktavṛtti' has been succinctly and precisely expressed by Gadādhara in the following passage :—

> "anatiriktavṛttitvam eva avacchedakatvaṃ vivakṣaṇīyam, viśeṣaṇībhūtavahnyabhāvādyaviṣayyke śuddha-hradatvādinā vahnyabhāvaviśiṣṭa-hradādiviṣayakajñāne vahnyabhāva-viśiṣṭahradatvādyavacchinna-

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vilakṣaṇavisayatā-nirūpakatvasya asattvena uktāsambhavānavakāśāt, tathā kevala-vahnyabhāvatvādyavacchinna-viṣayakatvasya pratibandhakatātiriktatvāt nātiprasanga ityarthaḥ" (Ibid, pp. 1591-1592).

In this observation we should especially take note of the expression 'vilakṣaṇaviṣayatā' or the particular objectness which belongs to the total structure of the object, 'vahnyabhāvaviśiṣṭahrada'. To fix this particularity we need the first limiation wherein '(vahnyabhāvaviśiṣṭahrada)tva' appears as the limiting property that limits objectness only to the structural complex as a whole. Thus the partial objectness resting in the partial or constituent object 'lake' is excluded by this total 'viṣayatā'. The contradictory knowledge is contradictory only by virtue of the fact that it is determined by (or determines) this total 'viṣayatā' of the total object. Without abstracting out this total 'viṣayatā' from the constituent objects any definition of 'hetvābhāsa' would be impossible, since it will always extend to the parts. We have observed before that knowledge of the blue lotus is also the knowledge of the lotus. This is psychologically so, because the lotus is a constituent of the total objectivity determining the knowledge of the blue lotus. Yet there must be a logical distinction between the knowledge of the whole and the knowledge of the parts within the same cognitive structure. This distinction can be brought forth only by applying the concept of limitation. The objectness limited by '(blue-lotus)ness' is not the same as the objectness limited by blue-ness or lotus-ness. Hence in the context of this limitation '(nīlotpala)tvāvacchinnaviṣayatā' is . demarcated from 'nīlatvāvacchinna', or, 'utpalatvāvacchinna viṣayatā'. Once this demarcation is understood it is easy to see that '(nīlotpala)tva' or '(blue-lotus)ness' as a limiting property is 'anatiriktavṛtti', for it does not extend to the 'viṣayatā' belonging to the parts. This simple explanation may be extended, with proper modifications, to the instance of 'vahnyabhāvavān hradaḥ'.

Similarly 'vanyabhāvatvāvacchinnaviṣayatā' and consequently 'vahnyabhāvatvāvacchinnaviṣayakatva' are excluded from

the total 'viṣayatā' or 'viṣayakatva'. Mere knowledge of the lake or absence of fire does not constitute the contradiction. Such partial 'viṣayakatva' is 'atirikta-vṛtti', because it extends to a knowledge that does not stand in contradiction to the false inference, 'the lake has fire'. In this way by pinning down the total 'viṣayakatva' we get at the total complex of a limiting property and the definition is saved from the fault of 'ativyāpti' or over-extension and from 'asambhava' or impossibility.

It is for this purpose that the expression 'yadviṣayakatvena' in Gaṅgeśa's second definition is explained by Raghunātha as 'yādṛśaviśiṣṭaviṣayakatvena', and this explanation of Raghunātha is again interpreted by Gadādhara as—"yadrūpāvacchinna-viśiṣṭaviṣayakatvena". Here 'yadrūpa' etc., refers to that particular form of limiting property which limits the objectness and thus becomes the 'viṣayatāvacchedakadharma' that is necessary for determining the contradictoriness of the valid knowledge. In other words, the expression refers to '(vahny-abhāvaviśiṣṭahrada)tva'.

[Let – F stand for absence of fire, q for the relation of qualification and L for lake. Then this total limiting property will be expressed as, '(– F q L)ness'].

Logical Fiction and Epistemic Fiction.

This interpretation of the second definition makes it clear how we can refer to a valid contradictory knowledge even without inserting the word 'yathārtha' as it has been done in the first definition. We remember that this word in the first definition was meant for preventing the over-extension of the definition to an invalid contradictory knowledge which may inhibit a valid inference. When a mountain having fire is apprehended as having the absence of fire, the object of the false knowledge is only an epistemic object without any correspondence to fact. In that case '(– F q M)ness' or '(vahnya-bhāvaviśiṣṭa*parvata*)tva' turns out to be a purely fictitious property. In our consideration of 'hetvābhāsa' we are dealing with a world of facts and not with a world of pure fictions. Logical fictions are introduced here only as operative appliances

for differentiating valid knowledge from invalid knowledge. We want to draw some distinction between a fact-based fiction and a 'non-fact-based' fiction. What we mean is this :— If '– F q M' is a true proposition, then '(– F q M)ness' is a property based on fact. Yet it is a logical fiction in the sense that it is not a real property over and above the proposition. It is not a real property like blue-ness belonging to blue or mountain-ness belonging to mountain. So it is a fiction though it is derived from fact. But suppose '– F q M' is a false proposition. Then '(– F q M)ness' is a pure logical fiction because it is derived from a proposition that does not correspond to fact, but exists only as an epistemic object in the structure of knowledge itself. Thus the truth or falsity of '– F q M' is the measure of difference between a fact-based logical fiction and a non-fact-based logical fiction. If one likes to make a terminological difference one may reserve the term *logical fiction* for what we call fact-based fiction, and the term *epistemic fiction* for what we call non-fact-based fiction.

In this particular case where '– F q M' is a false proposition the word 'yadrūpa' in Gadādhara's expression 'yadrūpāvacchinnaviśiṣṭaviṣayakatva' would not refer to '(– F q M)ness' which is an epistemic fiction not backed by fact. Hence '(– F q M)ness' cannot operate as a fact-based logical property for the purpose of limiting an objectness that would finally determine the contradictoriness of knowledge. Thus if the logical property limiting an objectness is taken in the sense of a fact-based logical fiction, we can do away with the word 'yathārtha' inserted in the first definition.

This distinction between the fact-based logical fiction and the non-fact-based epistemic fiction should be kept in mind to understand the following observation of Raghunātha :—

> "avacchedakatvaṃ ceha anatirikta-vṛttitvam, tena viśiṣṭasya asattve'pi bhramāt pratibandhe'pi na kṣatiḥ" (Ibid. p. 1590)

:—[The character of a limiting property is its non-extension beyond the limitable property. So even in the case of a false

contradiction there is no harm, even though there is no such objectness of a qualified objective fact as is to be determined by a contradictory false knowledge].

Gadādhara interprets 'viśiṣṭasya' as 'viśiṣṭaviṣayakatākatvasya', and so our translation has become more interpretative than literal. Raghunātha means to say that since in a false contradiction 'viśiṣṭa' has no factual basis, so 'viśiṣṭaviṣayakatva' or the logical character of 'having a qualified object' (i.e., when '– F q M' is false) belonging to the invalid contradictory knowledge turns out to be a purely fictitious epistemic limiting property about which the question of 'atiriktavṛttitva' or 'anatiriktavṛttitva' does not arise at all.

Just as there may be a false contradiction to a valid knowledge so there may be a false contradiction to a false knowledge. Raghunātha's interpretation of the second definition also precludes the object of the latter type of knowledge from the scope of the definition. This has been brought out more effectively by Jagadīśa in his commentary on Raghunātha's Anumānacintāmaṇidīdhiti. Suppose somebody somehow takes a pitcher to be a lake and some bright red seeds to be burning charcoals. Now the pitcher having absence of bright red seeds would be apprehended by him as the lake having absence of fire. This false knowledge also inhibits the false inference 'the lake has fire'. Here too the object of the contradictory false knowledge will not constitute a fault of the inference, because the epistemic object, 'vahnyabhāvaviśiṣṭahrada', appearing in the inhibitory knowledge, does not figure in fact which is really the pitcher qualified by the absence of bright red seeds. So Jagadīśa explains Raghunātha's word 'bhramāt' in the passage quoted above as follows :—

> "bhramāditi—hradatvādirūpeṇa ghaṭādau, vahnyādyabhāvatvena guñjādyabhāvasya bhramād ityarthaḥ" (A.C.J. p. 1010)

A subsidiary problem arises in this context. The false inference, 'the mountain has smoke, because it has fire', implies

the false generalisation,—'whatever has fire has smoke'. It is false since the probans 'fire' exists in the locus, red-hot iron-ball, where the probandum 'smoke' does not exist. Here the fire existing in a locus having no smoke constitutes the fallacy of violation or 'vyabhicāra' (dhūmābhāvavadvṛttiḥ vahniḥ vyabhicāraḥ). It contradicts the false 'parāmarśa', which is the composite synthetic judgment just before the inferential conclusion. The 'parāmarśa' here takes the form, 'dhūmavyāpyavahnimān parvataḥ'. Now the 'vyabhicāra' or 'dhūmābhāvavadvṛttiḥ vahniḥ' is a knowable (prameya) object. We assume, in conformity with our earlier discussion, that the contradictoriness of the contradicting knowledge of 'vyabhicāra' is limited by the limitor,—'(dhūmābhāvavadvṛttivahni)tvāvacchinna-viṣayakatva'. This 'avacchedakadharma' may be stated as :— '(– S cl F)ness l v'. ['Dhūmābhāvavadvṛttiḥ 'vahniḥ' means that fire is co-locative (samānādhikaraṇa) with the absence of smoke. ' – S' stands for absence of smoke, 'cl' for 'samānādhikaraṇa' or co-locative, F for fire, 'l' for limitation and 'v' for viṣayakatva].

We go to the next section for discussing the problem to be posed in this context.

Section—IV

RAGHUNĀTHA'S VIŚIṢṬĀNTARĀGHAṬITA DEFINITION—THE LAW OF SUFFICIENCY

Now such a fire as qualified above is also qualified by knowability or 'prameyatva'. The question is whether 'prameyatvaviśiṣṭa (dhumābhāvavadvṛttivahni)' would constitute the 'vyabhicāra' or not. Apparently it should be so, because the knowledge of (– S cl F) qualified by 'prameyatva' also stands in contradiction to the inference. This extended qualification does

not detract from the contradictoriness of the knowledge. If now 'Ky' stands for knowability then '{Ky q (– S cl F)}ness l v' should be considered as good a limitor of contradictoriness as '(– S cl F)ness l v'. The former extended limitor (with the addition of knowability) is also 'anatiriktavṛtti', because it does not exist in a knowledge which does not possess the contradictoriness. So apparently we are entitled to extend 'vyabhicāra' upto 'Ky q (– S cl F)' which also may figure as the object of contradictory valid knowledge.

Yet this extension is not allowed, for it violates the law of sufficiency. For the sake of logical exactitude we should also take into consideration the need of logical economy and so should take into account as much contradictoriness of knowledge as is sufficient to contradict a false inference or inferential generalisation. The knowledge of '– S cl F' is alone sufficient for contradiction. The addition of the qualification, 'knowability,' does not subvert the contradiction, nor does it strengthen it, but is more than sufficient. So a logical law must be found out to eliminate this fault of over-sufficiency. Raghunātha has formulated this law in his stipulation that,—"No sufficient qualificatory property of limitation should have as its constituent a less extensive qualificatory property which is also sufficient at the same time". When a constituent property suffices to limit the contradictoriness we do not require to elongate the property by a further qualification in order to limit the same contradictoriness of the same knowledge. In our case, while '(– S cl F)ness l v' is sufficient as a limiting property, '{Ky q (– S cl F)}ness l v' is a dispensable irrelevance. This operation of the law of sufficiency is implied by Raghunātha in the following observation,—"viśeṣaṇīyaṃ ca tādṛśa-viśiṣṭāntarāghaṭitatvena, tena prameyatvādiviśiṣṭe savyabhicārādau nātiprasaṅgaḥ,"—[What is sufficiently qualified should not be constituted of another property which is also sufficiently qualified for the same purpose. So the definition of 'savyabhicāra hetvābhāsa' does not over-extend to 'Ky q (– S cl F)' but stops at (– S cl F)] —(A. C. G. p. 1591)

Jagadīśa's Interpretation

To emphasise this point Jagadīśa explains Raghunātha's expression 'tādṛśaviśiṣṭāntara' as 'svātiriktatādṛśa', and continues thus—"prameyatvaviśiṣṭasavyabhicārādiśca svātiriktena savyabhicārādinaiva tādṛśena ghaṭita iti na tatrātiprasaṅgaḥ"

(A. C. J. pp. 1010-1011)

In the invalid inferential structure 'the mountain has smoke, because it has fire', the assumed generalisation 'whatever has fire has smoke' is obviously subject to violation. The violation is of the form '– S cl F', i.e., 'fire exists even in the absence of smoke'. The introduction of the further qualification 'prameyatva' or 'knowability' would give the form of violation as 'Ky q (– S cl F)'. The pronoun 'sva' in Jagadīśa's interpretation 'svātirikta' etc. refers to this elongated total form. The part thereof, i.e., '– S cl F' itself completes the fault. So this total is constituted in such a way that something other than the total (svātirikta) is enough to account for the fault. (In the Nyāya view the part is different from the whole). Thus this total formed by the redundant qualification 'prameyatva' or 'Ky'should not be counted as the fault.

Jagadīśa further clarifies the meaning of his own expression 'svātirikta' as follows :—

> "svātiriktatvañca svānavacchinnaprakāratāvacchedakatvam .... śuddhasavyabhicārasya viśiṣṭasavyabhicāratvānavacchinnaprakāratāvacchedakatvenaiva tatrātiprasaṅgabhaṅgāditi bhāvaḥ" (Ibid. p. 1011)

In other words, '{Ky q (– S cl F)}ness', as the limiting factor of the objective form of knowledge is different from '(– S cl F)-ness', which constitutes a more simple but sufficient limitation. These two limitations, properly speaking, give two different forms of knowledge. Hence '(– S cl F)ness' becomes the limitor of such a form (prakāratā) as is not limited by '{Ky q (– S cl F)}ness'. Yet '– S cl F' figures as a constituent of 'Ky q (– S cl F)'. Such a redundantly constituted complex whole is excluded from the scope of the fault by Raghunātha's

condition of 'viśiṣṭāntarāghaṭita'. But we are of the opinion that the law of sufficiency which we have explained above can explain the point in a correct but simpler way than the more sophisticated interpretation attempted by Jagadīśa.

Gadādhara's Interpretation

Gadādhara's interpretation of 'antarāghaṭita' in Raghunātha's 'tādṛṣaviśiṣṭāntarāghaṭita' appears more formidable due to the long compounds; but if we have patience enough to pursue the compounds the matter would not appear more diffi cult than Jagadīśa's interpretation. Gadādhara observes :—

> "antareti, svāvacchinnāviṣayakapratīti-viṣayatāvacchedakāvacchinnārthakam, tadaghaṭitatvaṃ tādṛśāviṣayaka – pratītiviṣayatvam.......prameyatvaviśiṣṭavyabhiĉāratvādeḥ svāvacchinnāviṣayaka – pratītiviṣayatāvacchedaka – vyabhicāratvādyavacchinnāviṣaya--ka – pratītiviṣayatāvacchedakatvābhāvāt na tadavacchinne ativyāptiḥ" (A. C. G. pp. 1596-1597)

It is agreed that '– S cl F' as the object of a contradictory valid knowledge constitutes the fault of 'vyabhicāra'. The knowledge of 'Ky q (– S cl F)' also contradicts the inferential generalisation or the complex judgment of 'parāmarśa'. Then why 'Ky q (– S cl F)' should not constitute the same fault ?— That is the question. After the analysis of this seemingly formidable compounds Gadādhra's interpretation finally settles down to this :— Since the knowledge of 'Ky q (– S cl F)' is also at the same time the knowledge of '– S cl F', the objectness belonging to 'Ky q (– S cl F)' is incomplete and impossible without including in its fold the objectness belonging to '– S cl F'. Hence the knowledge which is determined by the objectness limited by '{Ky q (– S cl F)}ness' cannot exclude '– S cl F' as its object. The fault as the object-complex of the contradictory knowledge should be non-inclusive of another complex which figures as the same fault. 'Ky q (– S cl F)' is not such a non-inclusive object-comples. So here the *included* shorter complex i.e. '– S cl F' should be considered as the fault, and not the *inclusive* longer complex. It is clear now

that Jagadīśa and Gadādhara practically make the same point in two different technical languages.

Gadādhara's 'Viśiṣṭadvayāghaṭitatvaghaṭita' Definition

The contradictory knowledge must be certain knowledge and not take tha form of a doubt. The wrong inference, 'the lake has fire' is contradicted by the sure knowledge 'the lake has no fire'. But the mere doubt of the form, 'whether the lake has fire or not', is not enough to constitute a contradiction. So the contradictory knowledge must be of the form of niścaya, i.e., be attended by a feeling of certitude. There may be cases where the contradiction is constituted by a combination of two or more contradictory cognitions. Suppose we have the certain knowledge that the lake has water, and suppose this knowledge inhibits the inference 'the lake has fire', in combination with a background knowledge, 'the lake having water has no fire',—'hrado jalavān vahnyabhāvavān'. The question is :—whether in such cases as in a combination of two contradictory knowledges wherein the contradiction is constituted by one knowledge being qualified by another knowledge (jñānaviśiṣṭajñāna), the fault of the inference should or should not be constituted by the combination of such two related objects of such two related cognitions. Here the contradictory form of this combined knowledge involves an inference of the form—'whatever has water has no fire, this lake has water, so this lake has no fire'. Here even before advancing to the stage of the final conclusion, the knowledge of the minor premise being qualified by the knowledge of the major premise in enough to block the wrong conclusion, 'the lake has fire'. Here the limiting factor (avacchedakadharma) of contradictoriness is the property of "being such a knowledge as is qualified by such another knowledge (tādṛśajñānaviśiṣṭatādṛśajñānatva)", which does not extend beyond this combined knowledge to another knowledge that is not contradictory in such a way. So 'tādṛśajñānaviśiṣṭatādṛśajñānatva' as the limitor of contradictoriness is 'anatiriktavṛtti',

that is, does not go beyond the limitable to the non-limitable. Now should we not say that :—Two combined objects of such a combination of knowledge, namely, 'something having water has absence of fire' and 'the lake has water', should together account for the fault of the inference, 'the lake has fire' ? That is the problem raised by Gadādhara and he answers in the negative.

The difference of this case from the former case of 'Ky q-(– S cl F)' is obvious. In the present case we are dealing with *two* combined propositional objects of *two* combined cognitions, one qualifying the other, while in 'Ky q (– S cl F)' we are concerned with *one* complex object of *one* complex knowledge which includes a shorter complex as its constituent. So the case of 'Ky q (– S cl F)' is eliminated by Raghunātha's condition, 'viśtṣtāntarāghaṭitatva'. But the present case under consideraiion cannot be eliminated by the same condition.

To eliminate this unwelcome case Gadādhara introduces the concept of "viśiṣṭadvayāghaṭitatva" in addition to Raghunātha's 'viśiṣṭāntarāghaṭitatva". By this Gadādhara wants to lay down a further condition that *two* such object-complexes (viśiṣṭadvaya) as are cognised by *two* combined cognitive complexes, of which one is qualified by the other, should not together constitute a fault, despite the fact that the property of being such a combination of cognitions, as a limiting factor of contradictoriness, is not an over-extensive property (anatiriktavṛtti). Gadādhara observes :—

> "yādṛśaviśiṣṭaviṣayakaniścayaviśiṣṭa-yādṛśaviśiṣṭa-viṣayakaniścayatvaṃ pratibandhakatānatiriktavṛtti tādṛśaviśiṣṭadvayāghaṭitasyāpi vivakṣaṇīyatayā uktaviśiṣṭavāraṇasambhavāt" —(A.C.G. p. 1595)

This new condition proposed by Gadādhara creates a new difficulty in another direction. In the fallacy of 'satpratipakṣa' or counter-inference a counter-probans seeks to establish the contradictory of the original probandum in relation to the same minor term. If the counter-inference is established the original inference is lost. If again the counter-inference is

at least equally strong the original inference is inhibited by a sense of indecision between the two. Be it a decisive contradiction or an inhibition bred by indecision, in either case the resistance against the original inference is successful. In a counter-inference a counter-probans is shown as being pervaded by the negation of the original probandum, and the minor term which is common between both the inferences is shown as the locus of the counter-probans. Hence here the original inference is countered by a combination of two cognitive complexes, namely, (1) the cognition that a counter-probans is pervaded by the negation of the original probandum, and (2) the cognition that the same minor term as in the original is the locus of this counter-probans. The fact stands that in 'satpratipakṣa' both the cognitive complexes are necessary to counter the original inference, and so the fault of the original inference is constituted by a combination of two object-complexes corresponding to two cognitive complexes. Hence the condition 'viśiṣṭadvayāghaṭitatva', as suggested by Gadādhara, would exclude 'satpratipakṣa' from ihe scope of fallacy. But it is an undesirable exclusion. Thus Gadādhara is compelled to condition his condition such that 'viśiṣṭadvayāghaṭitatva' is to be understood along with the exclusion of 'satpratipakṣa' from its fold.

All these complications, however, may be avoided by appealing to the Law of Sufficiency. The object of knowledge is to be considered as the fault, only to that minimum extent upto which the knowledge of the same object is sufficient for resisting inference. In 'satpratipakṣa' a combination of two cognitive complexes is necessary for resistance to the inference ; one is not sufficient. So two object-complexes together should constitute the fault. But in the false case of 'the lake has fire', the two cognitive complexes, such as 'the lake has water' and 'the lake has no fire', are not necessary to complete the resistance. Either the knowledge that the lake has water, or the knowledge that the lake has no fire, is sufficient to successfully combat the false inference 'the lake has fire'. Hence either the propositional object. 'the lake has water' or the proposit-

ional object, 'the lake has absence of fire', should constitute the fault of 'bādha'. The Law of Sufficiency demands that we should take it as a case of exclusive disjunction, not that of an inclusive disjunction.

A Related Problem of Avacchedakatva

A pertinent question crops up in this connection. It is generally accepted as a principle that the limitor or 'avacchedakadharma' should not be a heavy property if a lighter property is sufficient to limit the limitable. Thus in apprehending the absence of a pitcher the counter-correlativity or 'pratiyogitva' belonging to the pitcher in limited by 'ghaṭatva' or pitcher-ness, and not by 'pitcherness qualified by 'dravyatva'; 'Dravyatvaviśiṣṭa ghaṭatva (pitcherness qualified by substantivity)' is a heavier property than pure and unqualified 'ghaṭatva' which is sufficient as a limiting factor. If we accept this principle the question of '{Ky q (– S cl F)}ness', or, '{prameyatvaviśiṣṭa-(dhūmābhāvsamānādhikaraṇavahni)}tva' being considered as the determinant of the 'vyabhicāra hetvābhāsa' does not arise at all. Hence Raghunātha's conditioning elaboration of 'yādṛśaviśiṣṭa' as 'tādṛśaviśiṣṭāntarāghaṭita' is fruitless. As the limitor of objectness '{Ky q (– S cl F))}ness' is a heavier property than pure 'vyabhicāratva' or '(– S cl F)'-ness'; so by the Law of Sufficiency '– S cl F' should be treated as the fault of violation and not the heavier object-complex, 'Ky q (—S cl F)'. Jagadīśa raises this problem and observes that the question,—whether 'Ky q (– S cl F)' is to be counted as the 'hetvābhāsa' has sprung from an opposite opinion to the effect that sometimes even a heavier property should be accepted as the limiting factor. This is surely the case in the following false inference—"hrado dāhajanakadravyavān, dravyatvāt"—The lake has a substance causing burn, because it is a substance. Jagadīśa observes :—"vastuto gurudharmasya pratiyogitāvacchedakatvamate eva lakṣaṇam, anyathā 'hrado dāhajanakadravyavān dravyatvat' ityādau bādhasyāsambhavāpatteḥ"

—(A.C.J. p. 1012)

Here the knowledge that inhibits inference is that 'the lake has the absence of a substance causing burn'. A substance causing burn may be factually interpreted as fire. So one may argue that 'the lake has the absence of a substance causing burn' means 'the lake has the absence of fire'. Thus the property of '(burn-causing-substance)ness' or '(dāhajanaka-dravya)tva' appearing as the limiting factor of counter-correlativity of absence (pratīyogitāvacchedaka) is nothing but fire-ness which, as the limitor, is not a heavy property. If it is so, in the inference presented for consideration by Jagadīśa, there is no case of a heavier property becoming the limiting factor.

Against this seemingly easy solution of the problem Jagadīśa presents a useful distinction between the epistemic and the wordly fact. In the consideration of 'hetvābhāsa' we are concerned with the form and content of the contradictory knowledge. When a substance causing burn is equated to fire it is a matter of definition derived from fact. So it formally follows from this definition that an object of knowledge figuring as a negation the counter-correlativity to which is limited by '(burn-causing-substance)ness', or, '(dāhajanakadravya)tvāvacchinna-pratiyogitākaḥ abhāvaḥ', is the same as the object of knowledge figuring as the negation the counter-correlativity to which is limited by fire-ness, or, 'vahnitvāvacchinna-pratiyogitākaḥ abhāvaḥ'. Yet in the epistemic structural complex the content of knowledge as the 'substance-causing-burn' is not the same as the fire. This is easily understood if we consider the following analytical proposition—'A substance-causing-burn is fire'. Here in the total structure of the propositional knowledge the object-content appearing as the predicate must be analytically different from the object-content appearing as the subject. Otherwise the very proposition could not be entertained in knowledge. From this it follows that, so far as the epistemic structural content is concerned, the knowledge of a 'substance-causing-burn' and the knowledge of fire are not the same. It may be further assumed that a person who knows a substance causing burn

does not necessarily know it to be fire. In that case any epistemic equation between fire and the 'substance-causing-burṇ' is impossible.

Having these considerations in view the contradiction of the false inference that 'the lake has a substance causing burn' should be 'the lake has the absence of the substance causing burn', and not 'the lake has absence of fire'. If that be so the limitor of contradictoriness must be the heavier property—'(dāhajanakadravyābhāvaviśiṣṭa-hrada)tvāvacchinnaviṣayakatva', and not the lighter property, '(vahnyabhāvaviśiṣṭahrada)tvāvacchinnaviṣayakatva'. Here the limitor of counter-correlativity to negation must be 'dāhajanakadravyatva' and not 'vahnitva'. Thus even a heavier property sometimes should be accepted as the 'avacchedakadharma'. Otherwise, a negation determined by '(dāhajanakadravya)tva' cannot be established and so a lake qualified by such a negation is impossible. The knowledge of such a lake cannot operate as a contradiction, and the lake as the object of such a knowledge is excluded from the scope of 'hetvābhāsa', which is, however, not admissible. Now if on this consideration a heavier property is accepted as a limiting factor, Raghunātha's conditioning interpretation of 'yādṛśaviśiṣṭa' as 'tādṛśaviśiṣṭāntarāयघटita' is found to be relevant. By this new condition 'prameyatvaviśiṣṭavyabhicāratva' or 'Ky q (– S cl F)ness' in excluded from the scope of 'vyabhicāra hetvābhāsa'. In a similar way '(prameyavahnyabhāva)viśiṣṭahrada' is excluded from the scope of 'bādha' or direct inhibition of inference. It is for this reason that 'sāmānādhikaraṇya' or co-locativity of the limitor and the limitable, reinforced by the concept of 'anatiriktavṛttitva', is often considered enough to complete the concept of limitation, and so the emphasis on the lightness of the limiting property may be dispensed with.

A Simpler Definition Suggested

Raghunātha now quotes from someone a more simple definition of 'hetvābhāsa' which runs as follows :—

"yādṛśadharmiṇi yādṛśadharmavattājñānam anumiti-pratibandhakaṃ tasya dharmiṇaḥ tādṛśadharma-vattvaṃ hetudoṣaḥ".

[The fault of the probans is the having of such a character by such a characterised object as about which the knowledge of its having that character constitutes the contradiction to the inference] —(A.C.G. p. 1603).

Let us take the case of 'bādha'. The knowledge that 'the lake has absence of fire', inhibits the inference, 'the lake has fire'. The lake is the characterised object (dharmin) the knowledge of which as having for its character the absence of fire is the fault (hradasya vahnyabhāvavattvaṃ hetudoṣaḥ). Similarly in respect of the false inference, the mountain has smoke, because it has fire', contradiction is constituted by the knowledge of "the probans-fire's existence even without the probandum 'smoke'." Here 'existence without the probandum' constitutes the character the possession of which by the middle term 'fire' accounts for the 'vyabhicāra 'hetvābhāsa' :—'vahniniṣṭha(dhūmābhāvavadvṛttitvaṃ) hetudoṣaḥ'. Again in the case of a 'svarūpāsiddhi hetvābhāsa' such as is involved in the inference, 'sound is impermanent, because it is a visual percept (śabdaḥ anityaḥ cākṣuṣatvāt)', the knowledge of the sound's 'possession of the absence of visual perceptibility' counts as the contradiction. So the fault of 'svarūpāsiddhi' is constituted by the sound's possession of this absence—'śabdasya cākṣuṣatvābhāvavattvaṃ svarūpāsiddhi—hetudoṣaḥ'.

In all these cases the fault belongs to the middle term by virtue of the relation of 'ekajñānaviṣayatva' (being the object of the same knowledge) that we discussed before. Let us coin the term 'cognitive co-contentiveness' to mean this relation of 'ekajñānaviṣayatva'. In the structure of total knowledge to the effect that "the probans 'smoke' is assumed as existing in the minor term 'lake' which, however, possesses the absence of the assumed probandum fire", smoke figures as a co-content with the lake's having the absence of fire. Through this relation of co-contentiveness within the structure of the same knowledge

smoke is considered to be qualified by the fault, namely, 'the lake's having the absence of fire'. Thus the middle term 'smoke' becomes faulty, being qualified by the fault which is nothing but the propositional object of the valid contradictory knowledge.

Similarly this concept of the 'hetvābhāsa' conforms to the notion of 'vyabhicāra'. In the structure of the total knowledge to the effect that "the assumed probans 'fire' can exist in a locus in which the assumed probandum 'smoke' does not exist," fire figures as a co-content of its 'existence without smoke'. Through this relation of co-contentiveness within a common cognitive structure the probans 'fire' is qualified by the fault, namely, "fire's' existence without the probandum, smoke". Hence the probans 'fire' is faulty.

Let us take the case of 'svarūpāsiddhi' that we have shown above. In the common cognitive structure as a whole,—"the probans 'visual perceptibitity', is assumed to be existing in the minor term 'sound' which, however, does not possess the said probans",—the probans 'visual perceptibility' appears as a co-content of the "sound's possessing the absence of such a probans". Through this relation of co-contentiveness within the same structure of knowledge, the probans 'visual perceptibility' is qualified by the fault, namely, "the souud's possessing the absence of visual perceptibility". Thus the probans becomes faulty.

This definition of 'hetvābhāsa' quoted by Raghunātha presents the view of those who think that within the structure of contradictory knowledge the term figuring as the 'dharmin' or the qualified object should be treated as the adjective (viśeṣaṇa) and its qualifying property as the substantive (or better say, the property of 'having the property'—'dharmavattva'). This view has a considerable amount of plausibility. It seems to involve an underlying understanding to the effect that in the concept of fallacy the emphasis should be laid on that factor in the contradictory knowledge which marks its point of departure from the contradicted knowledge, and not on the

factor that is common and constant between the contradictor and the contradicted. In the false inference, 'the lake has fire' the contradiction is presented by the knowledge that 'the lake has absence of fire'. In these two cognitions the subject 'lake' standing for the minor term remains common and constant. This must be so, because contradiction requires the sameness of the subject. Absence of fire in the Himalayan snow cannot contradict the falsely assumed presence of fire in the lake. Hence the contradiction, truly speaking, obtains between the two varying predicates, presence of fire and absence of fire, in relation to the same subject. (We choose not to notice that fire is also common between its absence and presence, since presence of water and presence of fire may also be factually taken as contradictories). In order to bring out this predicative determination of contradiction the emphasis is to be laid on the predicate. To do justice to this understanding the original substantive-adjective position should be reversed. We should say that the false knowledge of '*presence of fire* in the lake' is contradicted by the true knowledge of '*absence of fire* in the lake'. Hence instead of saying that the fault is constituted by 'the lake qualified by the absence of fire' we should better say that the fault is represented by the form—'the posession of the property of absence of fire qualified by the lake'. In other words, instead of saying 'vahnyabhāvaviśiṣṭa hrado bādhadoṣaḥ', we should say—'hradaniṣṭha-(vahnyabhāvavattvaṃ) bādhadoṣaḥ'. Here the original predicative adjective, 'the absence of fire' takes up the role of the substantive, and the original subject-substantive 'lake', assumes the role of the adjective.

Gadādhara points out this implication of the definition as follows :—

> "sādhananiṣṭha-sādhyābhāvavadvṛttitvādeḥ eva vyabhicāratayā prasiddhiḥ, na tu tadviśiṣṭa-sādhanādeḥ, ato na tasya doṣatvam iti kaścidāha
> —(Ibid).

Raghunātha's expression 'kaścit' (someone says so), implies his dislike for this definition. The seed of this dislike is thus

pointed out by Gadādhara-"sādhananiṣṭha-sādhyābhāvavad-vṛttitvādeḥ iva sādhyābhāvavadvṛtti-sādhanādeḥ api doṣatve kṣativirahāt" (Ibid. p. 1604)

Gadādhara means that the fault may be equally expressed in both the forms, namely, "the probans' existence in a locus possessing the absence of the probandum", or, "the probans as *being qualified* by existence in a locus possessing the absence of the probandum". Here the difference between the two expressions lies purely in the form, but not in the material content of knowledge. This sameness of the object-content appearing in different forms of knowledge has been suggested by Raghunātha himself—"sādhyābhāvavadvṛttisādhanam, sādhana-vadvṛtti-sādhyābhāvo vā hetudoṣaḥ, yena kena cit sambandhena tadvān ca prakṛto ḥetuḥ duṣṭaḥ— (Ibid. p. 1591)

The meaning of 'yena kena cit sambandhena' is a reference to the various ways of 'ekajñānaviṣayatvasambandha' that we discussed in details before.

What appears as the substantive in the contradicted knowledge may appear as the adjective in the contradictory knowledge. Thus the false knowledge, 'the lake has fire' may be contradicted by the cognitive form 'the absence of fire belongs to the lake'. The change of position of the subject 'lake' into the predicative position in the contradictory propositional knowledge does not affect its contradictoriness in the least. Hence Jagadīśa observes—

"asamānākārasyāpi jñānasya pratibandhakatā..."
(A. C. J p. 1012)

Section—V

SOME MINOR MODIFICATIONS

After all these discussions on Gaṅgesa's second definition of 'hetvābhāsa' some minor modifications are still necessary. We have seen how Raghunātha has already suggested many modifications. He is still not satisfied : some further modifi-

cations after further discussions are felt necessary. We shall be now dealing with a minor modification. Contradiction to any inferenee does not determine the fault of any other inference. Contradiction to a particular inference determines the fault in relation to that inference alone. But this is not clear from the terms of the definition so far. Suppose 'the mountain has fire' is a valid inference, while 'the lake has fire' is an invalid one. That the lake has absence of fire accounts for the fault of an inference. But whose fault? It is not the fault of the valid inference. We made it clear in course of interpretative discussions, But it is not directly stated in the definitions as such. One may argue that the matter is obvious. When an inference is contradicted by some valid knowledge the fault obiviously belongs to the target of contradiction. But this obviousness does not bridge the technical gap in the definition. So the matter is to be interpreted this way,—The contradiction should be of the inference involving the same minor term with the same character, the same probandum with the same character, and the same probans with the same character as are involved in the object of the contradictory knowledge—

[atastaddharmāvacchinnatatpakṣaka - taddharmāvacchi - nnatatsādhyaka - taddharmāvacchinnataddhetukānumiti - pratibandhakatvṃ vācyam—Raghunātha]

—(A. C. G. p. 1604)

Thus 'the lake having absence of fire' as the object of contradictory knowledge does not constitute the fault of the faultless inference, 'the mountain has fire'. That which is involved in the object of the contradictory knowledge is not the mountain characterised by mountain-ness, but the lake characterised by lake-ness, which is involved as the minor term in the contradicted inference 'the lake has fire'. Thus the fault is attached, through the relation of 'ekajñānaviṣayatva', to the middle term 'smoke' involved in the inference, 'the lake has fire', and not to the middle term, 'smoke' involved in the inference, 'the mountain has fire'.

Again let us take two inferences, namely, 'the mountain has

fire' and 'the golden mountain has fire'. The former is valid and the latter invalid. Yet the fault of the latter should not be imposed on the former. The fault of the latter is constituted by the object of such a contradictory knowledge as that 'there is no goldenness in a mountain'. In the valid inference what is involved as the minor term is not the mountain characterised by golden-ness, but the mountain characterised by mountain-ness alone. This difference in the character of the minor-term in two inferences determines the fact that the fault constituted by the object of the cognition that there is no golden-ness in the mountain, cannot be attached to the inference 'the mountain has fire'. That is the reason why in his interpretative modification Raghunātha introduces such conditions as 'the same term with the same character' etc.

Gaṅgeśa's definition and its interpretation advanced so far still leave some serious gaps. When a probandum is already established in a minor term by an inference, this pre-established-ness inhibits an immediate further inference of the same probandum in relation to the same minor term. If 'hetvābhāsa' is defined as 'pratibandhakajñānaviṣaya' (the object of a valid inhibitory knowledge) as it has been done by Gaṅgeśa, an object of an already established valid inference would itself constitute a fault, since such an object inhibits the immediate repetition of the same inference. In this sense every valid inference would have constituted a fault virtually in relation to itself.

When somebody endeavours to establish something which is already accepted by the opponent he commits the fault of 'siddhasādhanatā' (establishing what is already established). The concept of this fault is based on the fact that in a debate one should not kill time by trying to prove something which the opponent already considers as having been proved. Hence any established valid inference stands as a handicap to any further demonstration or repetition of the same. But curiously enough, by Gaṅgeśa's definition, taken in its exact literal sense, every valid inference turns out to be a fault. Because 'hetvā-

bhāsa' has been defined as an object of valid inhibitory knowledge, the propositional object of any valid inference such as 'this mountain has fire' would itself become a 'hetvābhāsa,' for such an inference is an obstacle to the same inference being repeated.

To remove this difficulty which threatens to transform Gaṅgeśa's definition almost to an absurdity Raghunātha quotes a long definition—

> "yadviṣayakaniścayasya virodhiviṣayatāprayuktaḥ taduttaramanumitau anāhāryamānasajñāne vā pakṣatāvacchedakaviśiṣṭe sādhyatāvacchedakaviśiṣṭasādhyavaiśiṣṭyāvagāhitvasya sādhyatāvacchedakaviśiṣṭa-sādhyanirūpitavyāptiviśiṣṭa-hetutāvacchedakaviśiṣṭa-hetumattāvagāhitvasya ca dvayoḥ vyatirekaḥ tattvaṃ hetudoṣatvam"

(A. C. G p. 1606).

The pivotal importance of this newly proposed definition is concentrated in the expression 'virodhiviṣayatāprayukta' (determined by the contradictory nature of the object of contradictory knowledge), which marks the point of departure from Gaṅgeśa's definition. Gaṅgeśa's definition hinges upon the notion of 'pratibandhakajñānaviṣayatva'. The difference between the two notions is measured by the difierence between 'the object of contradictory knowledge' and 'the contradictory obiect of knowledge'. In the new definition contradictoriness is sought to be shown in the object itself, while in Gaṅgeśa's definition it primarily belongs to the knowledge of the object. In the case of 'siddhi' or pre-established-ness of inference the inhibition of the repetition of the same is caused psychologically by the consciousness that it is already established, and not by the consciousness that a *contradictory* object is already established.

Thus the new definition seeks to eliminate the psychological factor indolved in the inhibition and to replace it by the logical concept of contradictoriness belonging to the propositional object. The valid inference 'this mountain has fire' which is

already accepted, prevents the same being immediately repeated. This prevention is not determined by any contradiction between two referents of two propositions. So the new definition ushering in the notion of 'virodhiviṣayatāprayukta' eliminates the danger of the definition being over-extended to all cases of valid inference. But the invalid inference, 'this lake has fire', is successfully covered by the new definition. Here the propositional object 'the lake has no fire' or the established fact of the lake having the absence of fire, being caught in knowledge, stands in contradiction to the inferential proposition 'the lake has fire', and as such constitutes the falsity of the false inference. In short, the contradiction fundamentally obtains between the two objects of the two propositional cognitions (1) 'the like has absence of fire (true) and (2) 'the lake has fire (false).

This shifting of the primary and basic contradictoriness from the realm of cognition to the realm of object apparently solves the problem, but only apparently. The propositional object is the fact corresponding to a propositional knowledge. A fact is a fact, there is neither a true fact, nor a false fact. If we say that the lake having absence of fire is a contradictory fact, then what is sought to be contradicted should also be a fact, for the contradictor and the contradicted must belong to the same plane of objective reference. But the proposition, 'the lake has fire', cannot correspond to a fact, since there is no false fact in the world. At least the Naiyāyikas are never prepared to accept such a fact. For this reason they refuse to recognise 'alīka-pratiyogika abhāva' or negation of something absurd as a fact. The absence of sky-flower is not a fact in itself. The Naiyāyikas try to turn it into a fact by twisting the meaning of the expression as 'kusume gaganīyatvābhāva' or the negation in flower of the property of 'belonging to the sky'. Hence following this line of argument the difficulty may be tided over in this way :—

The presence of fire and the absence of fire taken by themselves are established objects of the universe. So the contradiction obtains between the presence of fire and the absence of fire in relation to the same subject 'lake—'hrade vahnyabhāvaḥ hrade vahnisattāviruddhaḥ'. In this way the substantive-adjective or

the subject-predicate relation is interchanged. It is the lake which stands as an adjective to the presence or absence of fire figuring as the substantive. Yet the difficulty cannon be totally done away with. The presence of fire and the lake taken separately are objects of the world no doubt. But is there an objective fact such as 'hradaviśiṣṭaḥ vahniḥ ? Definitely not. There is no such fact as the 'lake having fire' or as 'fire belonging to the lake'. There is nothing in the world of facts to be contradicted by the fact corresponding to the proposition 'the lake has no fire'. In that case it must be admitted that in final analysis there cannot be any logical contradiction between facts. Hence logical contradiction must be between two contradictory propositions which are logical entities or between two contradictory propositional cognitions. Thus the new definition based on the notion of contradictoriness of the object itself flounders on the rock of the very logical concept of contradiction which the new definition has claimed to embrace. So the newly proposed definition finally fails to make any improvement upon Gaṅgeśa, and the problem cropping up in the case of 'siddhi' or pre-established-ness of valid inference, which prohibits any immediate entertainment of the same inference, remains as it is, and every valid inference or valid proposition may become a case of fault.

Raghunātha has rejected this newly proposed definition on another count. In the Nyāya tradition of 'hetvābhāsa' such an inference as "nirvahniḥ parvato vahnimān" (the mountain having no fire has fire) has come to be accepted as a case of 'hetvābhāsa'. Quite apparently it is a self-contradictionary proposition the cognition of which is palpably absurd. If such an absurd knowledge is thoroughly impossible the very question of its contradiction does not arise. So it is beyond the very domain of logical truth-values, i.e. beyond the problem of truth or falsity. The Naiyāyikas think that an absurd knowledge is not a total impossibility. They maintain the possibility of such a cognitive fact as is called 'āhāryajñāna'.

It is defined as 'bādhakālīnecchājanyaṃ jñānam',—a know-

ledge that is caused by force of volition simultaneously with the cognition of its contradiction. It is a peculiar type of mental perception in which an obiect though perceived to be non-existent is brought up before the mind by force of volitional concentration. Though the mountain is rightly perceived as having absence of fire, yet by some exceptional exercise of volition it is conjured up before the mind as having fire. In such a mental perception two mutually opposed objects stand together without mutual cancellation in cognitive existence along with the knowledge of contradiction. But the Naiyāyikas do not recognise the possibility of this āhāryajñāna beyond the field of perception. If that is so the very problem of 'hetvābhāsa' regarding such an absurd inferential knowledge as 'nirvahniḥ parvato vahnimān' does not arise at all, because such an inferential cognition is not accepted as a cognitive fact. 'Āhāryajñāna' is possible only as a case of mental perception. Thus it is difflcult to see why this peculiar type of absurd inference should prove to be a headache for the purity of the definition of 'hetvābhāsa'. Moreover, an 'āhāryajñāna' is accepted to be uncontradictable. It is rightly so, for a willingly entertained contradiction cannot itself be contradicted. The very force of contradiction is lost when two contradictories are made to stand as co-existents in the same knowledge brought about by a peculiar force of volition. But our definition of 'hetvābhāsa' is based on the fundamental concept of contradiction. An 'āhāryajñāna' is beyond the pale of contradiction and also beyond the pale of inference. So why should the Naiyāyikas bother about it at all in the context of 'hetvābhāsa' ?

It is simply because the tradition among the Naiyāyikas accepts it as a case of fallacy. Perhaps the Naiyāyikas have been plagued with this problem for the following reason :—If somebody states—'nirvahniḥ parvato vahnimān' as a matter of inference you must assign some reason as to why it cannot be entertained. To pronounce some thought as absurd we are required to fix a fault upon it. It is true that the Naiyāyikas themselves do not recognise the possibility of 'āhāryajñāna' as a cognitive fact of inference, or of any possible knowledge other

than volitionally forced perception. Yet others admit such a possibility. Thus 'āhāryajñāna' constitutes the very foundation of the figures of speech employed in poetry. The poet says 'moon-face' as a case of 'rūpakālaṃkāra' which expresses a proposition of identity between the moon and the face. The poet knows very well that this identity is objectively absurd, yet he verily means this identity as an aesthetic object in order to bring out the exceptional beauty of a face. To do even a grain of justice to the poetic beauty of an expression we must admit 'āhāryajñāna' in this instance of verbal cognition (śābdajñāna).

The Naiyāyikas may not bother about poetry, but they have no right to command that nobody is entitled to entertain an 'āhāryajñāna' beyond the realm of perception because they, the Naiyāyikas, do not recognise any such āhāryajñāna as a possible psychic fact. Others will come forward any say,—we feel the very possibility of such 'āhārya-jñānas' in our psychic behaviour as you command us to ignore. We cannot obey your command, because you have no right to dictate the emergence of cognition in our psychic existence. So the Naiyāyikas are in difficulty. When others will say :—we entertain such an inferential 'āhāryajñāna' as 'nirvahniḥ parvato vahnimān ; it will not suffic to reply :—you have no such cognition. A fault must be shown in this case of absurd knowledge. Thus the notion of contradiction standing at the base of 'hetvābhāsa' does not extend to the instance of 'āhārya-jñāna' which is uncontradictable and uninhibitable.

Section—VI

THE DEFINITION FAVOURED BY RAGHUNĀTHA

This inadequacy of Gaṅgeśa's definition and of the subsequent attempts at improvement has prompted Raghunātha to leave Gaṅgeśa alone and to lend support to a definition which we are now going to examine. The definition runs as follows :—

"yādṛśapakṣaka-yādṛśasādhyaka-yādṛśahetau yāvanto doṣāḥ sambhavanti tāvadanyānyatvam hetvābhāsatvam"

—(A. C. G. p. 1921)

[A 'hetvābhāsa' is that which is different from what is other than as many faults as are (traditionally accepted to be) possible in such a probans with such a minor term and such a probandum (as may be the case)]

The author here introduces the method of definition by double negation such as 'A ≡ – (– A), i. e. a term or a statement is equivalent to the negation of its own negation. What is here meant to be the definition is simply this that a fault is equivalent to not-(not-fault). But such a definition hardly enlightens us on the nature of the thing or concept to be defined. That 'A ≡ – (– A)' does not tell us what 'A' is. It tells us more about the character or concept of negation than 'A' itself. It is a form that is true about any thing of the universe and not about 'A' alone. Truly speaking, this definition by negation of negation is an application of the Buddhist concept of 'apoha' as the meaning of a word.

The Buddhists do not accept the reality of the universal, since according to them the real is only the pure discrete particular of the moment which is significantly called 'svalakṣaṇa'. A word can mean only a universal meaning. Communication of meaning is possible only on the supposition that between the speaker and the hearer there is a common fund of meaning in which both can equally participate. Because 'svalakṣaṇas' as pure particulars of the moment have nothing common among them and because they differ from man to man and moment to moment, no word of a speaker can convey the same 'svalakṣaṇa' to the hearer, nor can convey even to himself the 'svalakṣaṇa' of an earlier moment at a latter moment. So the meaning is a universal which is only a logical construction (vikalpa) fixed by convention without any reference to the realm of reals. In such a case, the universal being unreal and the word failing to capture 'svalakṣaṇa', the only real, the meaning of a word can be defined only as a negation of negation. The meaning of the word 'cow' is equivalent to 'not(not-cow)'.

A similar situation appears to have arisen regarding the problem of giving a general definition of 'hetvābhāsa' covering all possible invalid inferences relating to the middle term. Hence Raghunātha has cleverly resorted to the method of double negation. The definition finally settles down to the statement that a fault is what is traditionally accepted as fault in the society of logicians (sampradāyasiddhaḥ doṣavyavahāraḥ). This does not give us a common connotative concept belonging to all possible faults. The definition tells us this much that in a particular case the fault is one among all the faults that are conventionally accepted as such.

Now we shall see that even this sense can hardly be brought out of the expression 'tāvadanya-anyatvam'. Let us take the statement—'A fault is other than what is different from all possible faults'. What is different from all possible faults is the rest of the universe. What is other than this rest may not be a single fault, but a group of faults. A single fault is not, however, the group. This raises a fundamental objection as to whether any particular fault can be equivalent to 'not(not-fault)'. Let us say, 'a man is equivalent to 'not(not-man)'. Not-man is the rest of the universe. So what is 'not(not-man)' is not *a* man, but the *class* of men. Then how can we say that *a* man is equivalent to the *class* of men ? The presentation by double negation would have been correct if 'man' stood for an individual man. If A is an individual there is no difficulty in stating that $A \equiv -(-A)$. In an equivalence it is hardly permitted to take one side as a particular and the other side as a universal.

There is another difficulty about this equivalence through double negation. If 'not-man' is a class, an individual under this class is also different from not-man. So mere difference from not-man does not necessarily give us 'man'. But the class that is different from not-man surely gives us 'man'. A man is a member of this class and so is excluded from the class of not-man. All this shows that we are entitled to say,—'fault ≡ not (not-fault)', but are not entitled to say,—'*A* fault ≡ not(not-fault)'.

It may be argued that here we are presenting the difficulty on the basis of equating equivalence to equality. Equivalence is not the same as equality, but is the relation of mutual implication. 'A man ≡ not(not-man)' would mean :—if A is a man, it is not true that A is not a man ; or better still, "A is a man, if and only if, 'A is not a man' is not true". This is an instance of the statement-form '$p \equiv -(-p)$'. Similarly we can say,—"A is a fault, if and only if, 'A is not a fault' is not true", Thus terminal equivalence should be transformed into propositional equivalence of the form '$p \equiv -(-p)$'. Even after admitting that our definition involves this propositional equivalence we cannot admit that such an equivalence gives us the definition of logical fault. The author in his attempted definition by negation of negation takes into consideration the relation of equality and not that of what modern logic calls equivalence. That negation of negation is equal to the original positive term is a generally accepted principle for the Naiyāyikas. According to them 'not(not-pitcher)' is equal to 'pitcher'. But the difficulty that we have raised is that whether we are entitled to say that 'not(not-pitcher)' is equal to '*a* pitcher'. If this equality is accepted a particular may attain equality with the class. Raghunātha seems to be conscious of this difficulty. So Raghunātha wants to turn this definition by double negation into an expression of class-membership. To do this he has introduced an interesting logical technique.

Let us take A, B, C as individual instances of man. Then $A = -(-A)$, $B = -(-B)$, $C = -(-C)$. We now want to reach a statement such as,—'A man is excluded from the class of not-man', or 'A man is a member of that class which is totally different from the class of not-man. Let us now introduce the notion of '*collective difference*' apart from individual differences. Now let us state this collective difference in the form :—

$$\text{not}\begin{Bmatrix} -A \\ -B \\ -C \end{Bmatrix}$$

Here we also get the notion of 'a *single* difference *from* a *collection* of differences', or 'a *single* negation of a *collective*

negation' (bhedakūtāvacchinnapratiyogitākabhedaḥ). This Sanskrit expression gives us a type of negation of negation (here difference from difference) in which the counter-correlate (pratiyogin) of the final negation is not an individual negation, but a collection of negations. This difference from *collective* difference is something *over and above* the sum of *particular* second-tier differences *from* the primary particular differences. In other words,

$$\text{not}\begin{Bmatrix} -A \\ -B \\ -C \end{Bmatrix}$$

is more than a mere summation of $-(-A)$, $-(-B)$, $-(-C)$. i. e., of A, B, C. Hence Raghunātha remarks :—

"sa cātirikta eva anyonyābhāvaḥ." Gadādhara comments—
"bhedakūtāvacchinnapratiyogitākaḥ bhedaḥ atiriktaḥ"
(A. C. G. pp. 1621-1623)

Let fA, fB, fC be all possible faults in a particular inference. Then we get a class of all possible faults in the following negation of negation :—

$$\text{not}\begin{Bmatrix} -fA \\ -fB \\ -fC \end{Bmatrix}$$

Each primary negatum within the brackets is a member of this class. Thus we get the definition of fault as :—a fault is equal to a member of the class of 'not (not-fault)', i.e., $\text{not}\begin{Bmatrix} -fA \\ -fB \\ -fC \end{Bmatrix}$, which is reduced to the statement that a fault is a member of the class of all possible faults. Thus the definition, 'yāvanto doṣāḥ tāvadanyānyatvam' is reduced to 'tāvadanyatamatvam'. In other words, a fault is one of the members of such a collective class as we have obtained in the above method.

But the definition in the term of a collective class-membership has an apparent defect. There may be a single fault in a particular inference. Since there is no collective class of faults (yāvanto doṣāḥ) the question of its membership does not arise. Hence Raghunātha hastens to add 'ekamātradoṣasthale ca tattvam eva hetvābhāsatvam',—where there is only one fault

that is the 'hetvābhāsa' there (A. C. G. Ibid). This additional condition attached to 'tāvadanyānyatvam' only shows that a proper definition of 'hetvābhāsa' in general is hardly possible to attain.

Raghunātha is himself conscious of this almost insuperable difficulty. Gaṅgeśa in his Tattvacintāmaṇi, following the Nyāyasūtraṣ, has classified 'hetvābhāsa' into five types (with which we shall deal in separate chapters later on). Raghunātha's interpretation of the definition is related to particular cases of inferences and not to inference in general. All particular wrong inferences do not involve the same number of fallacies. One may involve only one fallacy, another two or three, while still another all the five. When we say that a fallacy is one of the possible faults in a *partrcular* inference, the faults that are absent there are not covered by the definition. When we take up that particular inference do the faults absent therein cease to be faults thereby ? Then how do we classify fallacies into five types ? Raghunātha replies that this classification in made with an eye to a possible case in which all the five types are present. Raghunātha remarks :—

"pañcavidhabhedoktistu tatsambhavasthalābhiprāyeṇa"

(Ibid)

In that case we do not get a single common definition that is applicable to all possible fallacies. Let us take a scheme such as :—

Inf. I—one fault
Inf. II—two faults
Inf. III—three faults
Inf. IV—four faults
Inf. V—five faults. —in which

particular inferences differ from one another and the number of faults also differ accordingly. A proper definition of fallacy in general should be applicable to any fallacy in any particular inference. But this is not possible in Raghunātha's scheme of a definition applicable only to a particular case, Thus the expression 'yāvanto doṣāḥ tāvadanyānyatvam' or 'tāvadanya-

tamatvam' is not really one definition, but a collection of as many definitions as there are possible faulty inferences. Thus in the context of our scheme of five faulty inferences we get the following five definitions :—

(I) A fallacy is this one fault.
(II) A fallacy is either of the two faults.
(III) A fallacy is anyone of the three faults.
(IV) A fallacy is anyone of the four faults.
(V) A fallacy is anyone of the five faults.

Since the definiens (laksaṇa) on the right hand have no common determining or limiting factor (lakṣaṇānugamābhāva), the definition differs from particular to particular. Both Gadādhara and Jagadīśa remark that the definiendums (lakṣya) also lack a common determining and limiting factor (laksyatāvacchedakānugamābhāva), and so differ from case to case. Raghunātha admits this consequence of his definition and remarks that a mere application of the same word as the definiens or the definiendum is insignificant, since it does not prove the existence of a common limiting property (śabdābhedamātrasya akiñcitkaratvāt—Ibid). So let our definition signify as many definitions as there are possible instances of faulty inference. So what Raghunātha presents as the definition of 'hetvābhāsa' transpires to be a collection of definitions, in the sense that it implies a collection of as many particular definitions as there are particular faulty inferences. What he gives us is a class of definitions in the garb of a single definition, which in final analysis settles down to this that a fallacy is a member of the class of fallacies. We do not here define the class which is accepted as traditionally established in knowledge. We identify only a particular fault in a particular context. It is just like defining a man as a member of the mankind. It is difficult to see how this definition can escape the charge of circularity. That a man is a member of the mankind is a true proposition, but every true proposition is not a real definition. What the definition states is really a series of statements such as :—

A is man 1,
B is man 2, and so on.

Thus it is a statement of statements, which leaves man undefined.

But the problem is,—how do we feel enlightened by such a definition. If the collective class of faults is already established in knowledge what is the need of a definition ? The purpose of a definition is to achieve clarity of the concept pertaining to a term. So a term cannot be defined by using the same term again in the definiens. Thus Prof. Tarski quite rightly observes in his Introduction to Logic (p. 35)—"the definiens may be a sentential function of an arbitrary structure, containing, however, only constants whose meaning either is immediately obvious, or has been explained previously. In particular, the constant to be defined, or any expression previously defined with its help, must not occur in the definiens ; otherwise the definition is incorrect, it contains an error known as a *vicious circle in the definition*". The principle of definition enunciated by Tarski is accepted by the Indian logicians also.

Unfortunately, Navyanyāya, obsessed with a scrupulous care for avoiding under-extension (avyāpti) or over-extension (ativyāpti) undefatiguably labours only for some sort of mathematical exactitude, even at the cost of clarity of the concept. Thus 'dravya' or substance is sought to be defined as—'dravyatvajātimad dravyam'—substance is that which is qualified by the presence of the universal 'dravyatva' or 'substance-ness'. From the Nyāya standpoint it is a very accurate statement no doubt, but as an intended definition of substance it is a statement of doubtful worth. One cannot grasp the concept of 'dravyatva' without knowing first what a 'dravya' is. Mere accuracy of a statement is not enough to make a purposeful definition. After all that we have been discussing so long we come to the conclusion that Raghunātha almost realises the impossibility of a logically immaculate general definition of 'hetvābhāsa'. The definition (yāvanto doṣāḥ tāvadanyānyatvam) is practically a devious way of admitting logical impossibility of the definition of 'hetvābhāsa'.

Third Definition

Gaṅgeśa's third definition of 'hetvābhāsa' has been more or less ignored by the commentators. Perhaps they do not think it to be of much consequence. The third definition runs as follows :—

"jñāyamānaṃ sad yadanumiti-pratibandhakaṃ tattvaṃ vā hetvābhāsatvam" (A. C. G. p. 1580)

[The fallacy of the middle term is that which, being the object of knowledge, contradicts (inhibits) an inference].

In this definition the character of contradictoriness is transferred from knowledge to the object of knowledge. This raises the controversy whether an invalid knowledge is contradicted by a valid knowledge or by the *object* of a valid knowledge. It is admitted that mere existence of a fact cannot constitute a contradiction. That the lake has no fire is a fact. This fact alone, remaining unknown, cannot contradict the false knowledge 'the lake has fire'. That validity or invalidity is ultimately determined by a fact is not a matter of debate. Had there been no fact in the world the question of validity or invalidity could not have arisen at all. Yet a fact by itself is neither valid nor invalid. The fact is what it is. When we say it is not a fact, we do not mean that it is an invalid fact. We mean that such a fact does not exist. So the question of validity or otherwise belongs to the domain of knowledge which, if based on fact is pronounced valid, and going against fact is pronounced invalid. An invalid knowledge must exist in order to merit a contradiction. Now the question arises :— What does contradict an invalid knowledge, the fact itself, the fact being known as such, or the knowledge of the fact ? It is already admitted that the fact existing by itself beyond the pale of knowledge cannot contradict a false knowledge. So the choice is to be made between the two remaining alternatives. Bipedality of a man is a fact, and quadrupedality is not. One cannot say that bipedality of man contradicts his quadrupedality, for quadrupedality of man does not exist at all as a fact to invite any contradiction. So a fact contradicts

neither another fact nor a non-fact. Hence contradiction must belong to the level of knowledge, and not to the primary level of fact.

But can we not say that a false knowledge is contradicted by a fact figuring in valid knowledge (jñāyamāna viṣaya)? Apparently it is harmless, but logically and epistemically it is inaccurate. The moment we say that the fact figuring in a valid knowledge contradicts an invalid knowledge, the contradiction is at once raised to the level of knowledge. The fact does not leave its habitat in the world of facts and physically enters into knowledge. It only bestows a corresponding form (ākāra) upon knowledge. The physical fact by itself cannot be the content of knowledge. So the fact as the object-content of knowledge is psychologically inseparable from the form imparted to knowledge. It is thus logically more sound to say that the true *knowledge* of a fact contradicts an invalid knowledge, than to say that the *fact* figuring in knowledge constitutes the contradiction. In other words, because contradiction belongs to the level of knowledge we should better say that false knowledge is contradicted by the true *knowledge* of an object, and not by the *object* of true knowledge. This is also an answer to the controversy whether the *knowledge* of the middle term, or the middle term as the *object* of knowledge should be called the instrumental means of inference. Anyway the middle term as the object of knowledge settles down to the knowledge of the middle term. So it is logically more proper to say that knowledge of the middle term is instrumental to inference. It is now easy to see that contradiction should *logically* belong to knowledge and not to the object figuring in knowledge. It is also then understandable why Gaṅgeśa's third definition of 'hetvābhāsa' has been practically ignored as being not of much consequence. Moreover, the third definition fails to meet the problems raised by 'siddha-sādhanatā' (establishing the established) and 'āhāryajñāna' (willing entertainment of a self-contradictory proposition) that we discussed before in the context of the second definition. In the former case every valid propositional knowledge, or (according to the third

definition) every object of a valid propositional knowledge turns out to be a fault when it blocks the very emergence of a subsequent inference seeking to establish the same proposition already establised. Moreover, how can you attach a fault to something which is not born at all ? This raises an interesting logico-epistemic problem which we choose not to discuss in the present treatise.

After these detailed discussions on the general definition of 'hetvābhāsa' we are in a position to go for the special definitions of its different types.

CHAPTER—II

SAVYABHICĀRATVA OR ANAIKĀNTIKATVA

VIOLATION OF THE MAJOR PREMISE

Section—I

MEANING OF ANAIKĀNTIKATVA

(Non-exclusive Disjunction)

Fallacies of the middle term are broadly divided into five types—*savyabhicāra*, *viruddha*, *satpratipakṣa*, *asiddha* and *bādhita*. In the Nyāyasūtras 'satpratipakṣa' is termed 'prakaraṇasama', 'asiddha' is called 'sādhyasama' and 'bādhita' is called 'kālātīta', also otherwise called 'kālātyayāpadiṣṭa' (Ns. 1.2.4). We shall deal with these five types in five different chapters.

'Savyabhicāra' is defined in the Nyāyasūtras as "anaikāntikaḥ savyabhicāraḥ "(Ns. 1/2 5). The word 'vyabhicāra' means violation : here it means the violation of the inductive generalisation (vyāpti) represented by the Major premise. The concept of this violation is brought forth by the term 'anaikāntika' which on analysis fixes the concept in relation to the particular type of fallacy. 'Anaikāntika' is analysed as 'na aikāntika'. 'Ekānta' means one extreme and so 'aikāntika' means 'confined to one extreme'. Thus 'anaikāntika' stands for "not confined to one extreme". So Uddyotakara explains (under the same sūtra)—

"ekasmin ante niyataḥ aikāntikaḥ, viparyayād anaikāntikaḥ"

The terms 'ekānta' and 'anekānta' are very significant, for through these terms both Vātsyāyana and Uddyotakara anticipate the concepts of exclusive and non-exclusive disjunction which are so familiar in modern logic. A valid generalisation is the member of an exclusive disjunction. The relation between fire and smoke, expressed in the generalisation, 'That which has smoke has fire', implies two extreme possibilities, combined in such a logical sum as,—['an object having smoke

has fire' or 'an object having smoke does not have fire']. The first member of the disjunction is true and the second false. The truth of the first excludes the truth of the second. The two members of this disjunction are two 'ekāntas' which are exclusive extremes. The term 'anaikāntika' gives the idea of non-exclusive disjunction. Vātsyāyana has presented the following syllogism as an example (Ns. 1/2/5).

"Sound is eternal, because it is a non-tactile object (śabdaḥ nityaḥ asparśatvāt)". The implied generalisation is,— 'That which is a non-tactile object is eternal'. Here the two disjunctive possibilities may be expressed in the following logical sum,— 'A non-tactile object is eternal' or 'A non-tactile object is not-eternal'. Ātman (Soul) is a non-tactile object and is eternal, while intelligence (buddhi) is also a non-tactile object and is not-eternal. Here the disjunction is non-exclusive, since the truth of the one member does not exclude the truth of the other. The probans 'non-tactility' both goes and does not go with the probandum 'eternity' and so cannot be attached exclusively to one extreme. Thus the generalisation, 'Any non-tactile object is eternal', breaks down on the score of non-exclusive disjunction. In this sense the probans itself is called 'anaikāntika', for it is not exclusively attached to one member of the disjunction. Because of having such an 'anaikāntika' probans the 'vyāpti' or generalisation itself is called 'anaikānkika' as it does not constitute an exclusive extreme of disjunction. This is significantly expressed by Vātsyāyana in the following observation :—'nityatvamapi ekaḥ antaḥ, anityatvamapi ekaḥ antaḥ, ekasmin ante vidyate iti aikāntikaḥ, viparyāyad anaikāntikah, ubhayāntavyāpakatvāt" (Ns. 1/2/5).

The expression 'vyāpakatvāt' has been loosely used in the sense of 'saṃsparśitvāt'. The probans touches both the extremes. Thus 'savyabhicāra', significantly defined as 'anaikāntika', means a probans which happens to be the term of a member of non-exclusive disjunction. This kind of 'savyabhicāra' is called 'sādhāraṇa', because the probans is common to both the presence and the absence of the probandum.

There are two other types of 'savyabhicāra', namely, 'asādhāraṇa' and 'anupasaṃhārin', which too come within the scope of 'anaikāntika'. An example of 'asādhāraṇa' is 'śabdaḥ nityaḥ śabdatvāt' (Sound is eternal, because it has sound-ness)

The exact definition of this type of 'savyabhicāra' will be dealt with later on. Here we shall only confine ourselves to the point that notion of non-exclusive disjunction is applicable to this case. 'Śabdatva' belongs to the minor term 'śabda' alone. We already know instances such as Soul, God, Time and so on, wherein the probandum 'nityatva' is known as present. Such instances are called 'sapakṣas' or co-instances which are allied or akin to minor term. But the probans 'śabdatva' belongs to none of them. Again we know instances such as pitcher, furniture and so on, wherein the probandum 'nityatva' is already known as absent. Such instances are called 'vipakṣas' or counter-instances. But the probans 'śabdatva' does not belong to any such counter-instance. So the probans here is called 'asādhāraṇa' or uncommon in the sense that it is excluded both from 'sapakṣa' and 'vipakṣa', and is confined only to the 'pakṣa' or the minor term. The intended universal major premise should be,—'That which has sound-ness is eternal'. Since sound-ness belongs to sound alone the major premise is virtually reduced to the proposition to be established (pratijñā), namely, 'sound is eternal'. Thus the inductive generalisation represented by the major premise itself stands unestablished. The necessary relation of the probans to the probandum has not yet been apprehended anywhere in any 'sapakṣa' and the major premise stands itself as the proposition to be proved.

In such a case we are at a loss to decide between the two alternative members of the following disjunction :—'That which has sound-ness is eternal', or 'That which has sound-ness is not-eternal'. We cannot say which one is true and which false. In the case of 'sādhāraṇa' the 'anekāntatva' or non-exclusiveness of the disjunction flows from the fact that both its members may be true. This is due to the middle term being common to

both 'sapakṣa' and 'vipakṣa'. In the case of 'asādhāraṇa' the non-exclusiveness of disjunction is determined by the exclusion of the probans from both 'sapakṣa' and 'vipakṣa'. It is then impossible to decide between truth and falsity of any member of the disjunction. Either may be true and either may be false. We cannot fix one member to which truth or falsity is exclusively confined.

The stock-example of 'anupasaṃhārin' is 'sarvam anityam prameyatvāt' (All things are non-eternal, because they are knowable). Here the minor term 'sarva' exhausts the whole universe. Beyond the minor term there is no allied instance where the probans 'knowability' can be present, and also no counter-instance where it can be absent. Hence the intended generalisation (major premise), 'That which is knowable is non-eternal' remains unestablished. The proposition to be proved is 'all things are non-eternal' in which the minor term, 'all things' already comprehends the middle terms 'knowable things'. Thus the generalisation is actually a part of the very proposition to be proved. Now, since the generalisation remains unestablished we cannot decide the truth or falsity of any member of the disjunction—'All knowables are non-eternal' or 'All knowables are eternal'. The non-exclusiveness of disjunction is a logical consequence of this indecision. We do not know which one of the two members is true and which false. The probans is here called 'anupasaṃhārin', for it does not lead to any decisive conclusion (upasaṃhāra).

It is doubtful if modern logic would accept 'asādhāraṇa' and 'anupasaṃhārin' as instances of non-exclusive disjunction. But both Vātsyāyana and Uddyotakara take all the three types of 'savyabhicāra' as fitting instances of 'anaikāntika'. In sādhāraṇa' we decisively know that both the members of the disjunction may be true, while in 'asādhāraṇa' and 'anupasaṃhārin' we cannot decide between truth and falsity of either of the members. This indecision excludes the exclusion and so the disjunction is not-exclusive.

The truth of the universal major premise in a syllogism

requires it to be a member of an exclusive disjunction. It should belong to the form of the propositional function :— 'x is y for all values of x'. If x is y for some of its values, and not-y for some other values, the universality of the generalisation comes to grief. In other words, in the disjunction, ('x is y' or 'x is not-y'), we must exclusively decide in favour of the truth of one member. So where we cannot decide in this way, as in 'asādhāraṇa' and 'anupasaṃhārin', we cannot call the disjunction exclusive. That is to say, a non-decisive disjunction may also be called non-exclusive,—so think Vātsyāyana and Ūddyotakara. They are right in thinking so, since presentation of two exclusive alternatives of which the truth of the one implies the falsity of the other constitutes the logical core of a correct generalisation. In this respect the term 'anekānta' involving the concept of 'ekānta' more faithfully brings out the logical basis of 'savyabhicāra' than some other attempts at hair-splitting definitions.

The Buddhist logician Dharmakīrti alsoe xplains anaikāntika in the sense of non-exclusive disjunction. His definition of 'anaikāntika' clearly suggests this :—

> "ekasya rūpasya asapakṣe asattvasya asiddhau anaikāntikaḥ hetvābhāsaḥ"

["When another essential characteristic of a correct probans, namely, its absence in counter-instances, stands unestablished, the fallacy is called the violation of the universal major". Prof. Stcherbatsky translates the name of the fallacy as 'uncertainty', which is more implicational than literal].

The non-exclusive disjuction standing at the root of this fallacy is brought out by Dharmottara in the following words—

> "ekaḥ antaḥ ekāntaḥ, sa prayojanamasya iti aikāntikaḥ, na aikāntikaḥ anaikāntikaḥ, yasmāt na sādhyasya na viparyayasya niścayaḥ, api tu tadviparītaḥ saṃśayaḥ, sādhyetarayoḥ saṃśayahetuḥ anaikāntikaḥ uktaḥ"
>
> (Nyāyabindu, K. J. R. I. Ed. p. 195)

The absence of the probans in the counter-instances means

that it does not go along with the absence of the probandum. Thus in the disjunction, 'x is y' or 'x is not-y', if we know that x both goes and does not go along with y according to different values of x, the generalisation 'x is y' becomes doubtful, because we are not sure which particular value is signified by the variable x.

Properly speaking, this interpretation of Dharmottara is not exactly faithful to Dharmakīrti. When we definitely know that 'x is not y' for some of its values, the generalisation 'x is y' is no longer doubtful, since its violation has been definitely ascertained. Anyway, non-exclusive disjunction constitutes the basis of the violation of the universal major.

The question of doubtful generalisation is presented by Dharmakīrti in the next step—

"tathā asya rūpasya saṃdehe api anaikāntika eva"

[That is also a fallacy of 'anaikāntikaḥ' when we do not definitely know if the probans is absent or present in the counter-instances—Ibid. p. 197].

This is the case of disjunction where we cannot decide if 'x is y' or 'x is not-y'. Here our failure to fix truth or falsity on either member of the disjunction makes it non-exclusive in this particular sense.

Section—II

SOME DEFINITIONS EXAMINED

In his examination of the earlier definitions of 'savyabhicāra' and in formulation of his own definition of the same Gaṅgeśa again and again raises the question of alternative possibilities presented by a 'savyabhicāra' probans. The first definition examined by Gaṅgeśa is—

"savyabhicāraḥ sādhya-tadabhāvaprasañjakaḥ"

[A 'savyabhicāra' probans is that which entails both the presence and absence of the probandum. A.C.G. p. 1637)].

This definition, despite the correctness of its underlying idea, is couched in defective language. Entailment (prasañjakatva) is a necessary relation which, however, according to the definition goes to mean that the same probans is invariably related to both the presence and the absence of the probandum (sādhya-sādhyābhāva-ubhaya-sādhakatva), or, to the probability of both (ubhayāpādakatva). This is absurd, because the same probans cannot establish both the absence and the presence, or the probability of absence and presence, of the same probandum. Hence Gaṅgeśa remarks—

"ekasya ubhayaṃ prati asādhakatvāt ca"

Thus the definition involving the idea of entailment breaks down on the count that both the presence and the absence of the probandum, or the probability of both, cannot be entailed by the same probans. So Raghunātha remarks—"na ca viruddhobhayavyāpyatvam ekasya sambhavati" (Ibid).

The next important definition examined by Gaṅgeśa is :—

"sādhyasaṃśaya-janaka-kotidvayopasthāpaka-pakṣa-dharmatājñānaviṣayatve sati hetvabhimataḥ saḥ (savyabhicāra)" :—

['savyabhicāra' is that term intended as the probans, which becomes the object of such a knowledge of its being a property of the minor term as causes the presentation of two opposite extremes, which in its turn causes doubt about the probandum—Ibid. p. 1639].

Let us take a familiar example of 'sādhāraṇa savyabhicāra'—'parvato vahnimān prameyatvāt (the mountain has fire, because it is knowable)'. Here the intended universal major is,—'that which is knowable has fire'. The probans 'knowability' belongs to the minor term 'mountain'. The knowledge of this belonging of the probans to the minor term is called 'pakṣadharmatājñāna'. This mere knowledge of 'knowability' as belonging to the mountain presents two such opposite extremes as the presence and the absence of fire in the mountain. Hence the probans 'knowability' is 'savyabhicāra' by suggesting a possible

violation of the generalisation. The idea behind this definition is this :—If both the knowledge of 'vyāpti' and the knowledge of 'pakṣadharmatā' (i.e., the major premise and the minor premise) were valid, the latter could not have presented two such contradictory alternatives as to throw the conclusion into doubt. But here despite the validity of 'pakṣadharmatājñāna' (minor premise) two contradictory alternatives force their way into consideration, causing doubt about the very probandum 'fire'. Hence it follows by implication that the major premise, i.e., the 'vyāpti' itself is subject to violation.

This definition is rejected by Gaṅgeśa himself on the following ground :—

> "etadajñāne'pi sādharaṇyādipratyekasya jñānād udbhāvanācca svaparānumitipratibandhād udbhāvitaitannirvāhārthaṃ sādhāraṇādeḥ avaśyodbhāvyatvena tasyaiva doṣatvācca"—Ibid. p. 1667.

The purport of this observation may be explained as follows :—

The proposed definition of 'savyabhicāra' comes down to this :—

> "sādhyasaṃśayajanaka-kotidvayopasthitijanaka-pakṣadharmatājñānaviṣayatvaṃ savyabhicāratvam"

We have seen that the general definition of 'hetvābhāsa' is based on the concept of contradiction or inhibition of inference. Hence the special definition of a particular type of 'hetvābhāsa' is also expected to be based on this basic notion. But the proposed definition of 'savyabhicāra' proceeding upto 'pakṣadharmatājñāna' is not necessary for the knowledge of contradiction. A knowledge of contradiction is quite possible without counting the knowledge of the meaning of this definition as a common element covering the three types of 'savyabhicāra'. The main content of 'savyabhicāra' is that the proposed probans may exist even without the proposed probandum. It is such knowledge that is necessary for prohibiting the inference in case of 'savyabhicāra'. But the proposed definition is encumbered with irrelevant elements and does not directly

touch the notion of contradiction inherent in all 'hetvābhāsas'. The definition points to the violation of the universal major only by implication. As a further step the knowledge of this violation prevents the inference. Thus the definition suffers from two major defects—(i) It does not directly touch the problem of contradiction and (ii) contradiction is more directly possible with the direct knowledge of the violation of the universal major, thus making many elements of the definition irrelevant to the concept of 'vyabhicāra' itself.

In the three types of 'savyabhicāra', namely, 'sādhāraṇa' 'asādhāraṇa' and 'anupasaṃhārin', commoness of the probans to the presence and the absence of the probandum, uncommonness of the probans due to its being confined to the minor term alone and the inconclusiveness of the probans are respectively necessary for contradiction of the inference. In every case the generalisation is called into question. In the definition, however, we do not get these elements directly, but by implication through the irrelevant and dispensable complexities running upto 'pakṣadharmatājñāna'.

The two terms 'jñāna' and 'udbhāvana' in Gaṅgeśa's observation respectively cover the cases of inhibition and contradiction, both of which are intended by the term 'pratibandha'. When a person himself goes to falsely infer smoke from fire, the emergence of his knowledge that fire may exist even without smoke inhibits the possibility of his own inference. When somebody makes such a wrong inference, somebody else comes forward to show up the violation of the generalisation. In this case of wrong inference made by others the showing up of violation constitutes the contradiction. The violation is here 'udbhāvita' or shown up by the opponent. In short, one's own knowledge of the violation inhibits one's own inference, while showing up the violation contradicts the inference made by the opponent. Hence Gaṅgeśa says—

"jñānād udbhāvanācca svaparānumitipratibandhāt".

We have very often used the term 'contradiction' to cover inhibitlon also, since inhibition too is a kind of contradiction

in the sense that it contradicts or negates the possibility of a future inference. Moreover, Gaṅgeśa uses one term 'pratibandha' to cover both. To expose a contradiction through violation of the genernlisation, one is to pin down commonness (sādhāraṇya), uncommon-ness (asādhāraṇya) and inconclusiveness (anupasaṃhāritva) of the probans in the three types of 'savyabhicāra' respectively. These elements constitute the 'hetvābhsāa' of 'savyabhicāra' in its respective types. But these are not directly obtained from the proposed definition. So Gaṅgeśa correctly rejects the definition mainly on the ground of irrelevance. Raghunātha sharply points out this irrelevance in the following observation :—

> "vastutastu upasathāpakatvādijñānam anumiteḥ tajjanakasya vā na pratibandhakam, virodhiviṣayakatvābhāvāt"—(Ibid).

[The knowledge that the probans, belonging to the minor term, presents alternate possibilities causing doubt, does not constitute (an immediate) contradiction to inference or to its immediate cause (i.e. parāmarśa) beeause the object of such knowledge is not directly contradictory to the object of inference.] In other words, contradiction emerges here only as a result of some implicative deduction.

After examining some definitions of 'savyabhicāra', based on the notion of causing doubt, Gaṅgeśa proceeds to try some other definitions involving the notion of contradiction. The first such definition to be examined is :—"pakṣavṛttitve sati anumitivirodhisambandhāvyāvṛttiḥ anaikāntikaḥ"

[A probans suffering from the fault of 'anaikântika' (savyabhicāra) is that which, while existing in the minor term, is not excluded from the relations standing in contradiction to inference—Ibid. p. 1569].

The term 'avyāvṛtti' in the definition is interpreted by Raghunātha as 'atyantāyogavyavaccheda', i,e., absence of total exclusion. 'Atyantāyoga' is again explained by Gadādhara as—"pratiyogivaiyadhikaraṇyāvacchinnaḥ abhāvaḥ"—[A ne-

gation limited by counter-locativity of the counter-correlate—Ibid. p. 1670],

This interpretation is necessary to underline the notion of total exclusion. It is demanded of a valid probans that it should never co-exist with the absence of the probandum. But it may be the case that a wrong probans may both exist and not exist along with a probandum in different contexts of time and place. Let us take for example the false inference 'parvato vahnimān rāsabhāt'. In the cookshed a donkey may exist at a certain time along with fire and not with the absence of fire. So it is not at this moment 'vahnybhāva-vadvṛtti'. Now 'vahnyabhāvavadvṛttitva' is a relation that stands in contradiction to inference. If we drop the term 'avyāvṛtti' (absence of total exclusion) from the definition we shall not find any fault with the donkey, since when it exists along with fire in the cookshed it does not enter into the contradictory relation of 'vahnyabhāvavadvṛttitva' and thus falls beyond the pale of fault. But it is faulty no doubt. So without the term 'avyāvṛtti' the definition suffers from the fault of under-extension (avyāpti). The term 'avyāvṛtti' attached after the expression 'anumitivirodhisambandha' rectifies this defect.

At another time or place the donkey exists along with the absence of fire. So it is not totally excluded from the relation of 'vahnyabhāvavadvṛttitva'. In the context of the absence of this relation, the same relation figures as the counter-correlate (pratiyogin) of the absence. But in different contexts the donkey also enters into the relation of 'vahnyabhāvavadvṛttitva'. Thus donkey is the locus of both the presence and the absence of 'vahnyabhāvavadvṛttitva'. The negation or absence is thus co-locative (samānādhikaraṇa) with the 'pratiyogin', and not counter-locative (vyadhikaraṇa). But when we say that an absence is limited by counter-locativity of the 'pratiyogin' (pratiyogivaiyadhikaraṇyāvacchinnābhāva). we mean that the absence and the presence of the 'pratiyogin' must never belong to the same locus, i.e., we mean a total absence. So the donkey is not totally excluded from the relation of

'vahnyabhāvavadvṛttitva' (Hence it is 'atyantāyogavyavacchinna').

Thus the probans 'donkey' is not free from the fault of 'savyabhicāra' and is so covered by the definition. The existence of the probans both in the co-instance and the counter-instance, the exclusion of the probans both from the co-instance and the counter-instance and the inconclusiveness of the probans which has neither a co-instance nor a counter-instance inhibit the inference. The relation of the probans to the first condition constitutes 'sādhāraṇya', to the second condition constitutes 'asādhāraṇya' and to the third condition constitutes 'anupasaṃhāritva', Thus the definition covers all the three types of 'savyabhicāra'. The probans is not excluded from these fault-determining relations.

The difficulty with this definition lies in the fact that even before understanding the definition we are already supposed to know the three conditions of the probans which account for the three types of 'savyabhicāra'. Every such condition forms a fallacy. This supposed general definition is nothing but a collection of three 'definitive' conditions attached respectively to the three types of 'savyabhicāra'. It is virtually a collection of three definitions of the three types. Hence it does not matter whether we know or do not know this general definition of 'savyabhicāra' which tells us nothing new over and above the special definitions of the special types. The knowledge of the special definitions is quite independent of the socalled general definition which is not at all necessary to spot the fallacy in each type. In other words, this general definition does not give us any common conceptual character running into the three types. So Gaṅgeśa observes :—

> "etadajñāne jñāne'pi vā āvaśyakapratyekajñānasya doṣatvāt"—

[Whether we apprhend or not the content of this general definition, a fallacy is determined by the knowledge of each of the conditions (which form the special definitions), and this

knowledge is definitely necessary for fingering out a 'savyabhicāra—A.C.G. p. 1669].

In other words, this general definition of 'savyabhicāra' is an irrelevant exercise.

Gaṅgeśa finds a further fault with the definition in the adjectival condition, 'pakṣavṛttitve sati' (the probans while belonging to the minor term'). This condition is apparently attached in order to demarcate 'savyabhicāra' from 'asiddha' in which case the probans does not exist in the minor term. But a special type of fallacy must conform to the general definition which we discussed in the first chapter, This general definition rests upon the notion of contradiction or inhibition of inference. So we have concluded that a wrong probans is that which fails to establish the probandum. This is technically called 'asādhakatānumāna' to which Gaṅgeśa has devoted a special chapter. This may be roughly stated as follows :—

"This probans does not establish the probandum, because it is an object of such a valid knowledge as contradicts inference".

Now 'pakṣavṛttitva' is a necessary element for establishing the probandum. Hence the introduction of 'pakṣavṛttitva' as a condition in the definition of any fallacy is not only irrelevant to 'asādhakatānumāna', but also goes against the very central notion of contradiction involved in the general definition of fallacy. Gaṅgeśa presses home this point with the remark :—

"asādhakatānumitau vyarthaviśeṣaṇatvācca"—Ibid.

Now we come to another important definition of 'savyabhicāra' which has been examined and rejected by Gaṅgeśa :—

"pakṣātiriktā-sādhyavanmātravṛttyanyatve sati
pakṣātirikta-sādhyābhāvavanmātravṛttibhinna-
tvam"—(Ibid. p. 1682).

This definition is virtually the same as we find in Maṇikaṇṭha Miśra's Nyāyaratna (p. 166). Maṇikaṇṭha reads 'vṛttyanyadharmattvam' in place of 'vṛttibhinnatvam', which

means the same. The definition may be roughly translated as follows :—

"The 'savyabhicāra' probans is that which is different from the one that exists only in the locus of the probandum, the locus that is other than the minor term ; and is also different from the one that exists only in the locus of the absence of the probandum, the locus that is other than the minor term".

A 'sādhāraṇa' probans exists along with both the absence and the presence of the probandum. It does not exist solely in the co-instance (sapakṣa) which is a locus other than the 'pakṣa', and also does not exist solely in the counter-instance (vipakṣa) which is also a locus other than the 'pakṣa'. Hence such a probans is 'pakṣātiriktasādhyavanmātravṛttanya', for it exists in the counter-instance also ; and at the same time it is 'pakṣātirikta-sādhyābhāvavnmātravṛttibhinna' for it exists in the co-instance also. Its existence in the co-instance makes it different from that which exists only in the counter-instance, i.e., along with the absence of the probandum : and its existence in the counter-instance makes it different from that which exists only in the co-instance, i.e., along with the presence of the probandum. Hence the definition involving the double difference is significant.

The condition 'pakṣātirikta' figuring twice in the definition is necessary for covering two types of asādhāraṇa'. The first type is illustrated in,—'śabdaḥ anityaḥ śabdatvāt'. This is called 'vyāpya-asādhāraṇa', since the probans 'śabdatva' is pervaded by the probandum 'anityatva'. The second type is illustrated in,—śabdaḥ nityaḥ śabdatvāt'. This is called 'viruddhāsādharaṇa', since the probans 'śabdatva' is really pervaded by 'anityatva' which is the contradictory of 'nityatva', the assumed probandum in this case.

'Śabdatva' belongs to 'śabda' alone which has the probandum, 'anityatva', and not to any co-instance which is different from 'pakṣa' and has got the same probandum. So it is 'pakṣātiriktasādhyavanmātravṛttyanya', i.e,, does not belong to a locus which is other than the 'pakṣa' and has the probandum. Again

'śabdatva' does not also belong to a counter-instance which is also other than the 'pakṣa' and has the absence of the probandum. Hence the probans is also 'pakṣātirikta-sādhyābhāvavanmātravṛttibhinna'. The introduction of the first 'pakṣātirikta' is thus necessary for covering the case of 'vyāpya-asādhāraṇa'.

The second 'pakṣātirikta' is not necessary for the first type of 'asādhāraṇa' which though fits into it, but is necessary for the second type, that is, 'viruddha asādhāraṇa' such as 'śabdaḥ nityah śabdatvāt'. Since 'śabdatva' belongs to the 'pakṣa' alone which here has actually got the absence of the probandum 'nityatva', it does not belong to any other locus having the same absence. Thus the probans here is 'pakṣātirikta-sādhyābhāvavadvṛttibhinna'. If we omit the second 'pakṣātirikta' the case is not covered. Here the 'pakṣa' is also 'sādhyābhāvavat', and the probans belongs to the same 'pakṣa'. So it is not different from that which exists in the locus that has the absence of the probandum. But 'being different in such a way' is necessary to satisfy the requirements of the definition. This requirement is fulfilled by the second 'pakṣātirikta'. The probans 'śabdatva' indeed belongs to a locus that has the absence of the probandum, and that locus is none other than the 'pakṣa' itself. The first 'pakṣātirikta' is not necessary for the case of 'viruddha-asādhāraṇa' which, however, simply fits into the condition. Thus the two introductions of the condition 'pakṣātirikta' together cover the cases of both 'vyāpya' and 'viruddha asādhāraṇa'. So Raghunātha observs,—"vyāpya-viruddhayoḥ asādhāraṇayoh saṃgrahāya pakṣātiriktapade"

—Ibid.

Gaṅgeśa records two faults in this definition. The definition does not cover the case of 'anupasaṃhārin' such as 'sarvam anityaṃ prameyatvāt'. In 'anupasaṃhārin' the 'pakṣa' exhausts the entire universe so that nothing remains beyond the 'pakṣa', neither a co-instance nor a counter-instance. According to the Nyāya view, a negation, the counter-correlate of which is not established anywhere in the universe, is itself unestablished.

In the case of 'anupasaṃhārin' anything beyond the 'pakṣa', being non-existent, is unestablished. Hence 'pakṣātirikta-sādhyavat' or 'pakṣātirikta-sādhyābhāvavat' turns into a fiction. Difference is also a type of negation. Hence difference from 'pakṣātirikta-sādhyavanmātravṛtti' or 'pakṣātiriktasādhyābhāvavanmātravṛtti' is also totally fictitious. Thus the definition leaves out 'anupasaṃhārin'.

To Maṇikaṇṭha, however, this does not count as a defect of the definition, for he does not recognise 'anupasaṃhārin' as a tyye of 'savyabhicāra' at all. To him leaving out 'anupasaṃhārin is a welcome consequence.

A more serious objection to the definition is raised by Gaṅgeśa on the ground that it is over-extended (ativyāpta) to such a correct probans as we get in the inference 'parvato vahnimān dhūmāt'. Because the probans 'smoke' is admittedly present in the 'pakṣa' 'mountain', it is not 'pakṣātirikta-sādhyavanmātravṛtti ((i.e., does not belong only to co-instances which are other than 'pakṣa', since it belongs to 'pakṣa' also). Again, smoke is obviously not 'pakṣātirikta-sādhyābhāvavanmātravṛtti, for it never exists in the counter-instances which have the absence of the probandum 'fire' and are definitely different from the 'pakṣa'. Thus the definition over-reaches to the case of a valid probans.

Section—III

FINAL DECISION ON THE DEFINITION OF SAVYABHICĀRA

In his final decision Gaṅgeśa at last seems to have resigned himself to the position that a general definition of 'savyabhicāra' is practically impossible. He tries to accept three definitions out of those which he rejected at first. These three are :—

(1) ubhyayakoṭyupasthāpakatāvacchedakarūpavattvam.

(2) viruddhānyapakṣavṛttitve sati anumitivirodhisambandhāvyavṛttiḥ.

(3) sādhyavanmātravṛttyanyatve sati sādhyābhāvavanmātravṛttyanyatvam. —Ibid. pp. 1685-1700.

Raghunātha at the very outset raises the question as to how these definitions now become acceptable when the defects already discovered in them stand intact. The first definition given here is only a better and condensed form of a corresponding definition which was rejected earlier by Gaṅgeśa and was discussed at length by us before. Gadādhara poses the question in a straightforward manner :—

> "nanu pūrvapakṣagranthokta-lakṣaṇāvalambanena siddhānta-praṇayanam asaṃgataṃ tattaddoṣāṇāṃ jāgarūkatvāt" —Ibid. p. 1686.

As we remember, the main contention against the first definition was this :—

The knowledge of this general definition of 'savyabhicāra' is not necessary for detecting the fault. What is necessary is the separate congnitions of the separate definitive conditions such as *sādhāraṇya*, *asādhāraṇya* and *anupasaṃhāritva* in relation to the respective three types of 'savyabhicāra'. The general concept of 'hetvābhāsa' is based on the notion of inhibition or contradiction. The contradiction is determined by the knowledge of *sādhāraṇatva* etc., and not by the knowledge of the definition which does not give us a common character pertaining to all the three types.

Now Gaṅgeśa, as interpreted by Raghunātha, takes a new position. A special definition specifying a special type is necessary for demarcating one type from another. In short, special definitions exhaust their utility by facilitating the classification. So it is not necessary that in every special definition of 'hetvābhāsa' we should go harping on the central notion of contradiction. In demarcating one 'hetvābhāsa' from another 'sajatīyavyavaccheda', or locating internal difference between two types of 'hetvābhāsa', is enough. 'Vijātīyavyavaccheda' or demarcation of a 'hetvābhāsa' from a correct 'hetu'

is not necessary while we go to demarcate one 'hetvābhāsa' from another. Raghunātha sharply remarks :—

> "tajjñānasya anumityapratibandhakatayā teṣāṃ hetvābhāsatvāvacchedakatvaṃ na ghaṭate, na ghaṭatām, kiṃ tena ? teṣāṃ hetvābhāsabibhāga-mātropayogitvāt. —Ibid. p. 1685.

Now this definition of 'savyabhicāra' is acceptable to those who think that 'savyabhicāra' probans vitiates an inference by raising doubt about the presence of the probandum in the minor term. There are others who think that a 'savyabhicāra' probans contradicts the universal major of syllogism, and so the inference is stifled through the impossibility of 'parāmarśa'. The advocates of this latter view will look for the second definition (viruddhānya ... etc).

In this second definition the condition, 'viruddhānya', is inserted for demarcating 'savyabhicāra' from 'viruddha hetvābhāsa', and the condition 'pakṣavṛttitve sati' is meant for its demarcation from 'asiddha hetvābhāsa'. Though the conditions 'viruddhānyatva' and 'pakṣavṛttitva' are not the constituent elements of any fault, yet these are necessary for demarcating one 'hevābhāsa' from another. It is admitted that neither the first nor the second definition gives us a single type of 'hetvābhāsa', called 'savyabhicāra', but each gives us conditions enough to collect three types of 'savyabhicāra' itself under one scheme. A disputant to be silenced should be shown that his probans is 'savyabhicāra' by showing that it is 'sādhāraṇa' or 'asādhāraṇa' or 'anupasaṃhārin', and not by throwing any general definition of 'savyabhicāra' in his face.

The third definition (sādhyavanmātra ... etc.) appears to strike a compromise between the supporters of the first and the second definitions. Gaṅgeśa rejected this definition before on the ground of 'vyarthaviśeṣaṇatva' (irrelevant adjective). The adjective 'sādhyābhāvavanmātravṛttyanya' prefixed to a 'hetu', does not reveal its incorrectness, but rather suggests one of the five major conditions of a correct 'hetu' (here 'vipakṣavyāvṛtti'). But this adjective has been found necessary to

distinguish 'savyabhicāra' from 'viruddha'. In the latter case the 'hetu' is pervaded by the contradictory or negation of the 'sādhya'. So the 'hetu' definitely belongs (only) to a 'vipakṣa' or counter instance. 'Sādhyābhāvavanmātravṛttyanya' means 'vipakṣamātravṛttyanya'. In 'sādhāraṇa hetvābhāsa' the 'hetu' exists both in 'sapakṣa' and 'vipakṣa'. An 'asādhāraṇa hetu' is excluded from both 'sapakṣa' and 'vipakṣa'. An 'anupasaṃhārī hetu' has neither a 'sapakṣa' nor a 'vipakṣa', because the 'pakṣa' covers the universe. Thus anything in the definition that suggests that the 'hetu' does not exist in the 'vipakṣa' cannot constitute an element of fault. A disputant spots a fallacy and shows it in order to silence his adversary. So it is irrelevant to show 'vipakṣavyāvṛtti' which is not an element of fault, rather of strength.

Now we remember the new position taken by Gaṅgeśa. To fix the internal distinction of one 'hetvābhāsa' from another it is neither necessary nor sufficient to state only those elements which constitute a fault. Some 'hetvābhāsas' may possess one element of fault and lack another. Hence to fix the line of demarcation the lack of a particular fault may need as much stress as the possession of some other. If we subscribe to this view such conditions as 'pakṣavṛttitva' or 'vipakṣavyāvṛtti' may be stated, if necessary, in defining a particular 'hetvābhāsa' in order to distinguish it from another, though these conditions do not form any element of fault.

But after all these efforts at finding a general definition of 'savyabhicāra', it is admitted by Gaṅgeśa that no such general definition gives any general character of the fault threading through the three types of 'savyabhicāra', and as such the purpose of finding a single definition covering the three is defeated. A 'sādhāraṇa hetu' is faulty because of its failure to generate the knowledge of 'anvayavyāpti' (positive universal major). An 'asādhāraṇa hetu' is faulty because it leaves the scope of raising a counter-syllogism. An 'anupasaṃhārī hetu' is faulty because of its failure to produce the knowledge of 'vyatirekavyāpti' (contra-positive negative generalisation

obtained through the transposition of the positive universal major). Thus the determining sources of faultiness being different in three varieties of 'anaikāntika', a common definition is impossible to attain. As a consequence the classification of 'hetvābhāsa' into five types becomes irregular, because the number of types increases on account of our failure to bring three varieties of 'anaikāntika' under one sub-class.

Gaṅgeśa accepts this contention and yet somehow haltingly comes to the defence of five-type classification made by the author of the Nyāyasūtras. Gaṅgeśa remarks :—

> "na caivam ādhikye bibhāgavyāghātaḥ / svarūpasatā anugatarūpeṇa trayāṇām ekīkṛtya maharṣiṇā bibhāgakaraṇāt / (Ibid. pp. 1700-1701)

The purport of this observation may be brought out as follows :—

In such a definition as "viruddhānyapakṣavṛttitve sati anumitivirodhisambandhāvyāvṛttiḥ" the expression 'anumitivirodhisambandhāvyāvṛtti(non-exclusion of the probans from any relation contradictory to inference) gives us a new logical concept which is common to the three varieties of 'savyabhicāra'. Though it does not show us the real determinants of faultiness such as 'sādhāraṇatva' etc., yet it fixes a total logical concept that covers all the three types of 'savyabhicāra'. We may call it a super-concept on the secondary plane based on the primary-plane concepts of 'sādhāraṇatva' 'asādhāraṇatva' and 'anupasaṃhāritva'. To avoid its over-extension to types of fallacies other than savyabhicāra the two conditions 'viruddhānyatva' and 'pakṣavṛttitva' are stated only as marks of demarcation. That Gaṅgeśa himself is not convinced of the effectiveness of this interpretative defence will be clear from his observation coming just after that which we have quoted above :—

> "na caviṃ sādhyābhāvajñāpakatvena bādha-prakaraṇasamayoḥ tadajñāpakatayā anyeṣām upasaṃgrahaḥ kuto na kṛtaḥ, iti vācyam, svatantrecchasya niyoga-paryanuyogānarhatvāt"
>
> —(Ibid. p. 1701).

What is meant here by Gaṅgeśa is this :—If we follow the line of arguments by which the three types of 'savyabhicāra' are brought under one head, we might have more reasonably classified all the 'hetvābhāsas' under two heads only. 'Bādha' and 'satpratipakṣa' (prakaraṅasama) stand in direct contradiction to an inferential conclusion (sākṣāt sādhyānumitipratibandhaka), while the other three, namely, 'savyabhicaāra', 'asiddha' and 'viruddha', directly contradict 'parāmarśa' and indirectly the inferential conclusion. Hence we should have classified 'hetvābhāsas' into two types on the basis of —(1) direct contradiction of inferential conclusion, and (2) direct contradiction of 'parāmarśa' ('sākṣāt sādhyānumitipratibandhakajñānaviṣayatva' and 'sākṣātparāmarśapratibandhakajñānaviṣayatva'). Gaṅgeśa recognises the force of this argument and remarks that the great sage exercising his free will can neither be commanded nor questioned. It is only a very polite way of recording one's disagreement with a great ancient authority. Raghunātha appreciates the difficulty and suggests that the only way to define 'savyabhicāra' is,—'sādhāraṇādyanyatamatvaṃ savyabhicāratvam'. ['savyabhicāra' is one of the three faults of 'hetu', 'sādhāraṇa' etc.]

We have seen before how Raghunātha has followed the same method in defining 'hetvābhāsa' in general. This is only an indirect admission of the fact that no real definition is possible in these cases.

Let us now proceed to take up the three varieties of 'savyabhicāra' one by one.

Section—IV

SĀDHĀRAṆATVA

(Commonness of the Probans in Contradictory Predications)

Gaṅgeśa defines 'sādhāraṇa' as—"vipakṣavṛttitvaṃ sādhāraṇatvam" (Ibid. p. 1705)—A 'sādhāraṇa hetvābhāsa' is that probans which is present in the counter-instance. A 'sādhāraṇa

hetu' really belongs both to the co-instance and the counter-instance. But Gaṅgeśa here omits the condition of 'sapakṣavṛttitva' which is stated in the definitions of the earlier writers. Gaṅgeśa's reason for this omission is stated as follows :— "tanmātrasya dūṣakatvāt". Since 'hetvābhāsa' means a faulty probans, in any definition of any type of 'hetvābhāsa' we state only that much as constitutes the fault. 'Sapakṣavṛttitva' does not point to a fault, but to the strength of an accurate 'hetu'. This favourable condition, according to the earlier writers, is necessary as a mark of demarcation from 'viruddha', such as, "Śabdaḥ nityaḥ kāryatvāt". 'Kāryatva or 'being an effect' is pervaded by the negation i.e., the contradictory of the probandum 'nityatva'. The valid generalisation is,—'That which is an effect is non-eternal. 'The probans 'kāryatva' belongs to such counter-instances as the pitcher etc., which have the absence of the probandum 'eternity', If only 'vipakṣavṛttitva' is stated as the definition of 'sādhāraṇa', it over-reaches to the instance of 'viruddha' in which also the probans has the character of 'vipakṣavṛttitva'. This consideration has prompted the earlier writers to accept 'sapakṣavṛttitva' also as a condition of 'sādhāraṇa' along with 'vipakṣavṛttitva'.

Gaṅgeśa replies that the difference between 'sādhāraṇa' and 'viruddha' is to be measured by the difference between the two concepts of (1) 'sādhyābhāvavadvṛttitva' and (2) 'sādhyābhāvavyāpyatva' i.e., (1) 'belonging to the counter-instance which has the absence of the probandum' and (2) 'being pervaded by the absence of the probandum'). There is no doubt that a 'viruddha hetu' has the character of 'vipakṣavṛttitva'. If you concentrate upon this concept alone there should not be any objection against taking a case of 'viruddha' also as a case of 'sādhāraṇa'. But if you fix your mind on the concept of 'sādhyābhāvavyāpyatva' you should finger out the 'viruddha' in the inferential statement, 'śabdaḥ nityaḥ kāryatvāt'. To silence the adversary a disputant may choose not to go as far as exposing 'sādhyābhāvavyāpyatva', but rest content with only showing 'vipakṣavṛttitva'. The adversary is silenced,

and hence there is no bar against calling it a case of 'sādhāraṇa'. So Gaṅgeśa remarks :—

"viruddhasyāpi tattvājñāne vipakṣavṛttitvajñānadaśāyāṃ sādhāraṇatvam, anyathā tasya hetvābhāsāntaratāpatteḥ, upādheḥ asaṃkara eva" (Ibid.)

Even in 'viruddha', when one does not recognise 'viruddhatva' (sādhyābhāvavyāpyatva), but recognises 'vipakṣavṛttitva' alone, the fallacy should be called 'sādhāraṇa'. Here the contradiction to inference is constituted by the knowledge of 'vipakṣavṛttitva', and not of 'sādhyābhāvavyāpyatva'. Thus it should be considered a case of 'sādhāraṇa' when one applies the concept peculiar to this particular 'hetvābhāsa'. Otherwise a new name has to be found for an instance which shows both 'viruddha' and 'sādhāraṇa hetvābhāsas. The fact is that here a single instance exhibits both the faults depending on two different conceptual directions. The concepts remain different despite the sameness of the instance. Thus a single instance may overlap both the faults, yet the two logical concepts of 'sādhyābhāvavyāpyatva' (viruddhatva) and 'vipakṣavṛttitva' (sādhāraṇatva) remain distinct without any chance of fusion. Overlapping by a single instance does not involve the overlapping of two distinct concepts into one another. (upadheyasaṃkare'pi upādheḥ asaṃkara eva).

Gaṅgeśa takes three more instances of overlapping.

(1) "Sarvam anityaṃ meyatvāt" (everything is impermanent, because everything is knowable). Traditionally it is counted as an instance of 'anupasaṃhārin', for the minor term (everything) exhausts the whole universe leaving no scope for any co-instance or counter-instance beyond itself. But 'knowability' exists even in absence of impermanence. When we consider the relation between the probans and the probandum, the universal major (vyāpti), 'that which is knowable is impermanent', falls through, because there are knowables such as atoms etc., which are not impermanent, and so are objects having the absence of the probandum. Here we get a clear case of 'vipakṣavṛttitva' when we take into account the 'vyāpti'

alone. But when we look at the minor term we find it to cover the whole universe without having any chance of a counter-instance outside the minor term. Here we get a clear instance of 'anupasaṃhārin'. Thus the false 'vyāpti' shows 'vipakṣavṛttitva', the essential character of 'sādhāraṇa', and the all-comprehensiveness of the minor term shows the absence of both 'sapakṣa' and 'vipakṣa', which is the essential character of 'anupasaṃhārin'.

(2) Let us take the second instance—'śabdaḥ nityaḥ śabdatvāt'. Traditionally it is an instance of 'asādharāṇa. Nevertheless, the element of 'sādhāraṇatva' too is unmistakably present here. 'Śabdatva' rests in 'śabda' alone which is impermanent in the Nyāya view. So the probans exists in a locus that has the absence of the probandum 'nityatva'. Thus the 'pakṣa' itself turns out to be the 'vipakṣa' where the assumed 'hetu' exists. So the 'hetu' is 'sādhāraṇa' from the standpoint of 'vipakṣavṛttitva', and also 'asādhāraṇa' from the standpoint of 'sapakṣavyāvṛtti (since apart from the 'pakṣa' there is no co-instance where 'śabdatva' does exist).

(3) The third instance is :—'bhūḥ nityā gandhavattvāt' (the earth is eternal, because it has smell.) It is a case of 'asādhārarana', for the property 'smell' (middle term) belongs to the minor term 'bhū' alone. But the character of 'sādhāraṇatva' is revealed as soon as we take the nature of 'vyāpti' into consideration. The character of being a 'pakṣa' (pakṣatā) is determined by the element of doubt about the existence of the probandum in the 'pakṣa' itself. When the mere proposition to be established is placed before a disputant one is not supposed to be sure about the predicability of the probandum in relation to the minor term. It is a matter of doubt waiting to be resolved by the proof. Now the middle term is supplied as a matter of proof. The adversary at once finds that the middle term belongs to the minor term alone and not to any possible co-instance. He immediately pins down 'asādhāraṇatva' of the middle term. But then one may choose to unfold the 'vyāpti' involved in the argument,—'that which has smell is

eternal'. The atom of earth having smell is eternal, but an earthen pot having smell is not eternal. The 'hetu' is clearly 'sādhyābhāvavadvṛtti', thus pointing to the fault of 'sādhāraṇatva'. So the fixing of a particular fault depends on what particular concept you bring to play in a particular stage of the argument. This conceptual relativity of the particular fault is stressed by Gaṅgeśa in the following observation :—

> "sarvam anityaṃ meyatvāt ityanupasaṃhārī. śabdo nityaḥ śabdatvāt, bhūḥ nityā gandhavattvād ityasādhāraṇaśca vastugatyā sādhyābhāvavadvṛttitvena sādhāraṇo'pi pakṣatādaśāyām udbhāvayituṃ na śakyate iti ubhayoḥ bhedena upanyāsaḥ"
>
> (Ibid. p. 1705)

This has been echoed in the 'Dyutimālikā' commetary on Maṇikaṇṭha's Nyāyaratna —

> "sandehaghaṭitapakṣatādaśāyāṃ sādhyatadabhāvāniścayadaśayāṃ tasya doṣatvam" (p. 170).

The same consideration applies to the case of 'anupasaṃhārin' such as 'sarvam anityaṃ meyatvāt'. 'Anupasaṃhāritva' is revealed at the stage of 'pakṣatā', and 'sādhāraṇatva' strikes us at the stage of 'vyāpti'.

In this context Raghunātha raises an interesting controversy as to the meaning of 'vipakṣa'. Against the view of Pakṣadharamiśra he contends that here 'vipakṣatva' means 'sādhyābhāvavattva' and not 'niścita-sādhyābhāvavattva'. It is enough to say here that 'vipakṣa' is the counter-instance which has, in fact, the absence of the probandum, and not necessarily the counter-instance in which we have sure knowledge of such an absence. This is supported by Gaṅgeśa himself in his observation,—"*vastugatyā* sādhyābhāvavadvṛttitvena sādhāraṇaḥ" (see the above passage quoted from Gaṅgeśa).

The reason behind Raghunātha's contention is that 'vyāpti' is defined as 'sādhyābhāvavadavṛttitva', and not 'niścitasādhyābhāvavadavṛttitva'. 'Vyāpti' or valid inductive generalisation is the exclusion of the probans from any locus that has got the

absence of the probandum. The definition demands only the factual exclusion. It does not demand that such an exclusion should necessarily figure as the object of somebody's sure knowledge. If we remember these limited requisites of the definition, the contradiction to the knowledge of 'vyāpti' should be constituted by the the *simple* knowledge of presence of the probans in a locus having the absence of the probandum, though the presence of the probans along with the absence of the probandum may not be entertained in one's *undoubted* knowledge. Gadādhara explains the point clearly :—

"na tu niścayagarbhaṃ vipakṣatvam...niścayāṃśa-jñānasya...vyāptijñānāpratibandhakatvāt"

(Ibid. p. 1706)

[We have already discussed before why contradiction should be better looked upon as belonging to the level of knowledge than as belonging to the level of facts. A false "vyāpti' is not a fact since there is no false fact. So how can it be contradicted by the fact of 'vyāpti' ? Hence it is right knowledge that contradicts wrong knowledge.]

Pakṣadhara, however, contends that if, for fixing the character of contradictoriness, the element of cognitive certitude is dispensed with, the cognition runs the risk of being extended even to the element of doubt, and thus the very possibility of any valid inference has to be discarded. Before going to establish an inferential proposition one entertains a doubt. This instance of doubt about the existence of the probandum in the minor term is bound to vitiate the knowledge of 'vyāpti' itself, and as a consequence the very possibility of any valid inference will be lost beyond retrieve. But that is impermissible, since one is not permitted to show the violation of generalisation by by pointing to the minor term about which the probandum is to be proved—("na hi pakṣe pakṣasame vā vyabhicāraḥ").

Raghunātha replies :—Possibility of valid inference depends on the certain *knowledge* of 'vyāpti'. Once the certitude is granted no suspicion of 'vyabhicāra' can arise. If we know that

a non-violating probans exists in the 'pakṣa' 'parāmarśa' emerges at once leading to the valid conclusion. The doubt about the existence of the probandum in the 'pakṣa' can persist only until we have a definite knowledge of the existence of such a non-violating probans in the 'pakṣa', i.e. until the emergence of 'parāmarśa'. If somebody is not certain about 'vyāpti' itself, and lacks subsidiary arguments in favour of 'vyāpti' (anukūla-tarkābhāve), doubt about the probandum in the 'pakṣa' will lead hm to legitimate suspicion of 'vyabhicāra' even in respect of a correct probans. The knowledge of 'vyāpti', however, is contradicted only by the knowledge of co-locativeness between the presence of the probans and the absence of the probandum. Hence Raghunātha remarks :—

> "vyāptiniścaye hetau vyabhicārasaṃśayāyogāt
> tadaniścayadaśāyām anukūlatarkāsphūrtau
> sandigdhānaikāntikatvasya iṣṭatvāt
> hetu-sādhyābhāva-sāmānādhikaraṇyāvagāhitayaiva
> jñānasya vypātigrahapratibandhakatvāt
>
> (Ibid pp. 1705-1706)

[Here Raghunātha agrees that contradiction belongs to the level of knowledge, but seems to think that the strength of the contradictory knowledge should not be necessarily sought in a sense of certitude, since even a suspicion of 'vyabhicāra' is enough to inhibit the knowledge of 'vyāpti' and inference.]

Yet one thing may be said in vavour of Pakṣadhara's position. He seems to be strictly faithful to the general definition of 'hetvābhāsa' suggested by Gaṅgeśa. A 'hetvābhāsa' is the object of a valid contradictory knowledge. Doubt is not considered to be a valid knowledge. So a 'hetvābhāsa' is to be called as such only in so far as an inference or 'parāmarśa' is inhibited or contradicted by a valid knowledge in relation to a seeming probans. In this view the element of certitude is necessary for contradiction. Inhibition by doubt can only point to a doubtful contradiction.

Section—V

ASĀDHĀRAṆATVA

(Exclusive confinement to the Minor Term)

An 'asādhāraṇa hetu' is excluded both from 'sapakṣa' and 'vipakṣa'. Exclusion from 'sapakṣa' means 'wherever there is the probandum there is the absence of the probans', which is equivalent to,—'wherever there is the absence of the absence of the probans (i.e., the presence of the probans) there is the absence of the probandum'. This is by contra-position, or better say, transposition. Thus the concept of 'sādhyavadvyāvṛttatva', which is the same as "sādhyavyāpakībhūtābhāvapratiyogitva" (i.e. the 'sādhya' is pervaded by the absence of the 'hetu'), finally leads to the absence of the probandum (sādhyābhāvaṃ sādhayet).

Again, exclusion from the 'vipakṣa' (sādhyābhāvavadvyāvṛttatva) would mean,—"wherever there is the absence of the probandum there is the absence of the probans (sādhyābhāvavyāpakībhūtābhāvapratiyogitva)", which by transposition is equivalent to,—"wherever there is the presence of the probans there is the presence of the probandum" (sādhyaṃ sādhayet) Thus of the twin concepts involved in 'asādhāraṅa' the one, 'sapakṣavyāvṛtti', goes to establish the absence of the probandum, while the other, 'vipakṣavyāvṛtti' goes to establish the presence of the probandum. Evidently there is a clash between these two concepts relating to the same 'hetu' and the result is the non-establishment of the probandum.—

> [vipakṣavyāvṛttatayā sādhyamiva sapakṣavyāvṛttatayā sādhyābhāvamapi sādhyayet—Gaṅgeśa, Ibid p. 1728
>
> Raghunātha explains—
> "evaṃ ca pakṣadharmatayā jñāyamāno hetuḥ sādhyābhāvavyāpakībhūtābhāvapratiyogitvajñānāt sādhyasya, sādhyavyāpakībhūtābhāvapratiyogitvajñānācca sādhyābhāvasya sādhanāya unmukhaḥ mithaḥ virodhena naikamapi sādhayati"—(Ibid. pp. 1728-1729)]

Gaṅgeśa, however, does not like to introduce the concept of 'vipakṣavyāvṛtti' in the definition of 'asādhāraṇa'. 'Vipakṣavyāvṛtti' is an admitted characteristic of a correct probans. Hence its inclusion is both confusing and irrelevant. Thus 'sapakṣavyāvṛtti' is enough for the definition :—

["lakṣaṇaṃ tu sarvasapakṣavyāvṛttatvam, na tu vipakṣavyāvṛttatvamapi, vyarthaviśeṣaṇatvāt—Ibid p. 1728]

Now a controversy arises as to the proper instance of 'asādhāraṇa', whether 'sabdaḥ anityaḥ śabdatvāt' should be considered a proper instance of it. In the Nyāya view the 'vyāpti' implied in this syllogism is quite valid. The Nyāya-Vaiśeṣika school takes sound to be an evanescent physical phenomenon. So the general proposition, "whatever has 'soundness' (i.e., sound) is non-eternal", is valid. The probans 'soundness' factually belongs to the 'pakṣa' sound. The 'pakṣadharmatā' of the 'hetu' is thus beyond doubt. When 'vyāpti' and 'pakṣadharmatā' (the major premise and the minor premise) stand unimpaired there is no bar against entertaining the correct conclusion, 'sound is non-eternal', through the operation of inevitable 'parāmarśa'.

The older school, supported by the great Gaṅgeśa himself, thinks that when one is in doubt about the existence of the probandum in the 'pakṣa' (which in this particular case becomes equivalent to doubt about the 'vyāpti' itself), this constitutes a proper case of 'asādhāraṇa'. But when one knows for certain that sound is impermanent (pakṣe sādhyaniścayadaśāyām) it is not an instance of 'asādhāraṇa', because in that case 'pakṣa' itself turns into a 'sapakṣa' from which the 'hetu' is not excluded (sapakṣavyāvṛtteḥ abhāvaḥ). From this viewpoint 'asādhāraṇa' is only a relative fault (anityadoṣaḥ), not an absolute one.

However, the newer school starting from Raghunātha views 'asādhāraṇa' as an absolute fault and so does not accept the above syllogism as a fitting instance of 'asādhāraṇa'. When we can establish by arguments from the world of facts that

sound is impermanent and thus the Mīmāṃsaka view is successfully controverted, the mere fact, that the probans 'sound-ness' does not belong to any other impermanent object than the 'pakṣa', sound itself, cannot contradict the 'vyāpti.' 'Vyāpti' involves the concept of co-locativeness between the probans and the probandum (hetoḥ sādhyasāmānādhikaraṇyam). The general proposition, 'whatever has soundness is impermanent', may be tested by its equivalent contra-positive negative form—'whatever has absence of impermanence has absence of soundness, for example, an atom'. The generalisation stands this test. So there is nothing wrong in the syllogism, 'śabdaḥ anityaḥ śabdatvāt'. Similarly the argument, 'ayaṃ ghaṭaḥ etattvāt' (it is a pitcher, because it is this), is a case of valid inference. A boy for the first time learns something to be a pitcher. He remembers it. When he is shown the thing for the second time he identifies it as a pitcher. This identification is a deduction from his previous experience. This deduction vaguely operating in the mind of the boy may be brought into bold relief by a logician in the form of this contra-positive analytical argument :—

That which is not a pitcher is not 'this'. But it is 'this'. Therefore, it is a pitcher.

In the view of this newer school the proper instance of 'asādhāraṇa' should be such as 'śabdaḥ nityaḥ śabdatvāt'. 'Śabdatva' is not co-locative with the 'sādhya', 'nityatva' (sādhyāsamānādhikaraṇaḥ hetuḥ). Thus 'asādhāraṇa' is properly accounted for by the absence of co-locativeness between the 'hetu' and the 'sādhya' (often attended by the fact that the 'hetu' belongs to the 'pakṣa' alone). According to the older view this is an instance of 'viruddha', since the probans 'śabdatva' is pervaded by the absence of the probandum 'nityatva'.

Here also, fixing a particular 'hetvābhāsa' depends on the particular concept that we want to operate. In the above instance if we take the 'hetu' as 'sādhyāsamānādhikaraṇa' (non-co-locative with the sādhya) we should accept it as a case of

'asādhāraṇa'. Again, if the 'hetu' is taken as 'sādhyābhāva-vyāpta' it will be a case of 'viruddha'. Gaṅgeśa himself suggests this :—

["viruddhamapi anena upādhinā asādhāraṇameva, anyathā etadavagame viruddhatvājñāne hetvābhāsāntaratāpatteḥ—Ibid p. 1728]

Suppose somebody advances the argument 'śabdaḥ nityaḥ kāryatvāt'. An effect is that which is produced, and so does not exist before production. It cannot be eternal. 'Being an effect' is pervaded by the absence of the probandum 'eternity'. If this aspect of the 'hetu', namely, 'sādhyābhāvavyāpyatva' strikes a disputant at the very outset he will silence his adversary by exposing 'viruddhatva'. Again, the character of being an effect is excluded from all co-instances, such as atom etc., where the probandum 'nityatva' belongs to. This aspect of 'sapakṣa-vyāvṛtti' may be noticed by an adversary at the very beginning, and the aspect of 'sādhyābhāvavyāpyatva' may escape his notice. In this case the opponent will be silenced by showing an 'asādhāraṇa hetvābhāsa'. If we do not admit this conceptual relativity in fixing a particular 'hetvābhāsa', what should we speak about a 'viruddha hetvābhāsa' wherein the disputant notices 'sapakṣavyāvṛtti' and not 'sādhyābhāvavyāpti' ? Should we then coin a new name for such a case of 'hetvābhāsa' ? It is useless to augment the number of 'hetvābhāsas' in this way. So despite the clear element of 'viruddhatva', the disputant here will be undoubtedly right in calling it a case of 'asādhāraṇa'. This has got clear confirmation from Gaṅgeśa in the remark that we have already quoted before—"viruddhamapi anena upādhinā asādhāraṇameva" In the wake of this argument advanced by Gaṅgeśa himself he cannot be really against accepting the inference 'śabdaḥ nityaḥ śabdatvāt' as an instance of 'asādhāraṇa hetvābhāsa'.

It has already been noted before in the context of 'sādhāraṇa' how Gaṅgeśa accepts an instance of 'viruddha' also as a case of 'sādhāraṇa'. Since Neo-Logic is especially concerned with the defining of logical concepts it stands to reason

that in identifying a fallacy of the probans what should matter most is not the particular instance of wrong inference, but the particular logical concept or concepts which may be brought to bear upon the instance to show where the wrong lies.

'Sādhyābhāvavadvṛttitva' (the presence of the probans in a locus having the absence of the probandum), 'sādhyābhāva-vyāpyatā' (the pervasion of the probans by the absence of the probandum) and 'sapakṣavyāvṛtti' (exclusion of the probans from co-instances) are three distinct logical concepts (upādhi) which may be shown to operate in a single instance which is normally taken as a case of 'viruddha'. So the same instance may be taken also as a case of 'sādhāraṇa' or 'asādhāraṇa' according to the particular concept one may choose to show the fault. For definining the fault of 'asādhāraṇatva' Raghunātha chooses the concept of 'sādhyāsāmānādhikaraṇya' (the probans' being non-co-locative with the probandum) in place of 'sapakṣa-vyāvṛtti' chosen by Gaṅgeśa, because the latter concept wrongly extends to the *correct* inference—'sabdaḥ anityaḥ sabdatvāt.'

Section—VI

ANUPASAṂHĀRITVA

(*Inconclusiveness from All-comprehensiveness*)

A traditional instance of 'anupasaṃhārin' is 'sarvam abhidheyaṃ prameyatvāt' (All is namable, because all is knowable). Things unknowable to men are known to God who, being omniscient, knows everything in the universe by name. So nothing is unknowable and nothing unnamable. In this instance the 'pakṣa', 'sarvam', encompasses the universe. The implied 'vyāpti' is,—'all that is knowable is namable'. Outside the 'pakṣa' there is no possible co-instance or counter-instance. We know that 'pakṣatā' or the essential character of being a 'pakṣa' is determined by doubt about the existence of the

'sādhya' in it (sandigdhasādhyakatva). Now if the doubt about the existence of 'namability' (sādhya) invades everything (pakṣa), the very 'vyāpti',—'whatever is knowable is namable' is vitiated by doubt. Beyond the 'pakṣa' there is no instance to facilitate the knowledge of co-locativity between the 'hetu' and the 'sādhya'. Hence Gaṅgeśa first defines 'anupasaṃhārin' as :—["vyāptigrahānukūlaikadharmyupasaṃhārābhāvaḥ yatra sa hetvabhimataḥ anupasaṃhārī)—(Ibid. p. 1747).

Here 'upasaṃhāra' means the settling of a 'hetu' in a co-istance (sapakṣadharmin) or the exclusion of the 'hetu' from the counter-instance (vipakṣadharmin). When no such positive or negatıve instance is available in the world we cannot secure the knowledge of co-locativity between the probans and the probandum or between the absence of the probandum and the absence of the probans. The 'hetu' is thus unsettled in knowledge.

Now this way of looking at 'anupasaṃhārin' is not fair. The traditional instance of 'anupasaṃhārin' may not be covered by this first definition proposed by Gaṅgeśa. Raghunātha enquires :—What is the exact meaning of the term 'upasaṃhāra?' Does it mean concomitance (sahacāra) between the 'hetu' and the 'sādhya', or the certain knowledge of such a relation ? In the first case, 'whatever is knowable is namable' is a valid generalisation, and so the concomitance is definitely there. Hence in terms of the definition no fault should accrue to the 'hetu', 'prameyatva'. In the second case the fault belongs to the ignorance of man and not to the 'hetu' itself. In the world of facts there may be a universal relation between two terms, and a person may not happen to know it. Ignorance of a person does not vitiate the validity of a generalisation. So Raghunātha suggests, Gaṅgeśa feels the need of proposing a second definition :—"kevalānvayidharmāvacchinnapakṣako vā" (Ibid. p. 1748). In the syllogism under consideration the minor term or 'pakṣa' (all) covers the entire field of reals. The property of 'allness' belongs to all the reals. Nothing is free from 'allness' which is an omnipresent property, since 'every-

thing' is included in 'all'. Thus a 'kevalānvayī dharma' means a property which is 'atyantābhāva-apratiyogī', i.e., a property the absence of which is impossible anywhere is the universe. The 'pakṣa', 'all', thus becomes 'kevalānvayidharmāvacchinna' in the sense that it is conceptually limited by the logical property 'allness'.

Now a 'pakṣa' by definition is that in which the existence of 'sādhya' is a matter of doubt. When a disputant does not go to examine the 'vyāpti' and is simply faced by the proposition 'sarvam abhidheyam', his doubt about the 'sādhya', invading the 'pakṣa', 'all', invades all possible things of the world. In such a case it is not at all possible to grasp the 'vyāpti'. In this position wherein doubt extends to everything in the world, the 'hetvābhāsa' in our illustration may be called 'anupasaṃhārin'. The all-comprehensiveness of the doubt negates the settlement of the 'hetu' in any instance. But when the generalisation or the 'vyāpti' has already passed into apprehension beforehand, there must be some instances which have also been appraised as containing the concomitance of the probans and the probandum. The co-instance, pitcher, may be a part of 'all', but is not the 'all'. It is then no longer possible to entertain doubt about everything. In this case the 'hetu' is to be considered correct and the inference is not vitiated by the fault of 'anupasaṃhāritva'. Gaṅgeśa thus observes in this connection :—

> [sarvam abhidheyaṃ prameyatvāt iti saddhetau na kevalānvayī pakṣatāvacchedakaḥ, niścitasādhyavadvṛttitvāt, vipratipattyā sādhyāniścayadaśāyāṃ pakṣatve tadanupasaṃhāri eva—(Ibid. p. 1748)].

It may be contended that, in respect of this particular syllogism, when the generalisation is already apprehended there is no possible scope of entertaining doubt about the 'sādhya' in relation to the 'pakṣa'. So the very character of being a 'pakṣa' is lost to it. Then how can you call it a correct syllogistic argument at all ? The traditional reply of neologic is well-known. Even when the probandum is already established in relation to a minor term, one is entitled to undergo a process

of inference if he has only the will to infer (siddhisattve'pi siṣādhayiṣāsattve punaḥ anumitiḥ bhavatyeva). Hence 'pakṣatā' is finally defined as —

"siṣādhayiṣāviraha-sahakṛtasiddhyabhāvaḥ", and not simply as 'siddhyabhāvaḥ'.

Gaṅgeśa, however, is conscious that his interpretation of 'anupasaṃhārin' is not very convincing. He himself has already remarked that the ignorance of a disputant cannot account for a fault. To say, that 'anupasaṃhāritva' is a fault when the disputant has not gone for examining the 'vyāpti', and is ignorant of it though it is factually there, is to recognise ignorance as a fault of the object of ignorance, which is unfair. So Gaṅgeśa goes on to suggest another instance of 'anupasaṃhārin' with the following observation :—

> "vyatirekisādhyake sādhyābhāvavadvṛttitvājñānadaśāyām idaṃ dūṣaṇam"—(Ibid. p. 1748).

Here the term 'vyatirekisādhyaka' stands for such a syllogistic instance as,—'sarvam anityaṃ prameyatvāt'. The generalisation implied here is, :—'whatever is knowable is impermanent', which is definitely false, since there are knowable permanent things such as time, space etc. The 'sādhya' 'anityatva', is 'vyatirekin', for its negation too is an established fact. In the 'anvayavyāpti' here it is possible to find a co-instance. It is possible to state, though incorrectly, 'whatever is knowable is impermanent, for example, the pitcher'. But it is not possible to find a counter-instance in which the absence of both the probans and the probandum may be grasped together. By transposition (or contra-position) we get the negative form of generalisation—'Whatever is not-impermanent is not-knowable'. But by common admission nothing is unknowable (for everything is known at least by God). Hence no instance of the transpositive 'vyāpti' holding together the negation of both the probans and the probandum is possible to find. The character of 'anupasaṃhāritva' is thus especially discernible as violating the possibility of the 'vyatirekavyāpti'. In such an instance the doubt about the probandum 'anityatva' in respect

of the minor term 'all' which comprehends the universe, keeps the 'hetu' practically unsettled.

Here too if we take the concept of 'sādhyābhāvavadvṛttitva' or 'vipakṣavṛttitva' in the sense that the probans 'prameyatva' co-exists with the absence of the probandum 'anityatva' in a locus like time, space etc., the fault should be considered as one of 'sādhāraṇatva'. When this concept is omitted in understanding, the doubt about the probandum in respect of everything in the world makes the probans a case of 'anupasaṃhārin'. Thus a single instance may provide an Illustration both of 'sādhāraṇa' and 'anupasaṃhārin' (Gaṅgeśa remarks—"tadavagame'pi sādhāraṇasaṃkara eva—(Ibid.).

This hindrance to the apprehension of 'vyatirekavyāpti', in which the negation of the probandum is pervaded by the negation of the probans, has been underlined by Raghunātha as the decisive mark of 'anupasaṃhāritva' in the following remarks :—

> "anupasaṃhāritvaṃ ca .... vyatirekavyāptigraha-virodhitāvacchedakarūpavattvam"—(Ibid. p. 1764)

According to Raghunātha, however, in the case of 'anupasaṃhārin' hindrance to 'vyatirekavyāpti' is determined by the fact that the negation of the 'sādhya', the 'hetu' or the 'pakṣa' is nowhere established in the world. So Raghunātha defines the 'avacchedakadharma', that determines the inhibition of the apprehension of 'vyatirekavyāpti', as,—"sādhyādeḥ atyantābhāvāpratiyogitvam"—(Ibid).

Viśvanātha in his Siddhāntamuktāvalī, following the line of Raghunātha defines 'anupasaṃhārin' as 'atyantābhāvāpratiyogisādhyakādiḥ',—(anupasaṃhāri is such a 'hetu' as in the case of which the negation of 'sādhya', 'pakṣa' or 'hetu' itself is factually unestablished in the world). In the syllogism 'sarvam abhidheyaṃ prameyatvāt', there is nothing in the world which is not 'abhidheya', not 'prameya' and not comprehended within the 'pakṣa'. So a 'vyatirekavyāpti' is impossible to grasp.

This opinion of Raghunātha is formulated at the end of his discussion on 'anupasaṃhārin'. *Apparently* Raghunātha here does not agree with Gaṅgeśa that the syllogism 'sarvam abhidheyaṃ prameyatvāt' may be a case of valid argument also (i.e., when the generalisation, which by itself is not faulty, passes into apprehension beforehand). Thus according to Gaṅgeśa 'anupaspṃhāritva' is not an absolute fault (nityadoṣaḥ), but only a relative fault (anityadoṣaḥ). Raghunātha *seems* to differ. The question is whether the argument, 'sarvam abhidheyaṃ prameyatvāt' is in conformity with the proper pattern of syllogism. He who knows that everything in the world is knowable and namable knows at the same moment the 'vyāptī',—'whatever is knowable is namable'. Thus the knowledge that everything in the world is knowable and namable is the same as the knowledge that all are knowables and namables. The point will be clear if we state the 'vyāpti' in the form—'all knowables are namables'. The converse is equally true—'all namables are knowables'. It is now clear that the proposition forming the conclusion 'all are namables' is not at all a new statement, since it is already known that all are both knowables and namables. Thus the middle term here is useless as it does not lead to any new information whatsoever about the minor term. It is not a proper syllogism and the middle term is only a pseudo-probans. This, we think, is the expanded significance of the definition of 'anupāsaṃhārin' as 'atyantābhāvāpratiyogisādhyakādiḥ'. When we already know that the negation of the 'sādhya' (abhidheyatva), the 'pakṣa' (sarva) and the 'hetu' (prameyatva) is not to be found anywhere in the world, to weave a pattern of syllogism, in order to drive home the point that all are 'abhidheyas', is simply a pointless exercise. In such a case the hindrance to the apprehension of 'vyatirekavyāpti', which is determined by the all-comprehensive character of all the terms, major, minor and the middle, constitutes the fault, and the logical root of the fault is the utter irrelevance of the middle term.

It has already been noted that Maṇikaṇṭha Miśra does not recognise 'anupasaṃhārin' as a sub-class of 'anaikāntika'. He

takes 'anupasāṃhārin' as a case of 'vyāpyatvāsiddha'. The reasons advanced by him in this regard do not appear very convincing. First he examines the syllogism 'sarvamanityaṃ prameyatvāt'. Neither in the positive generalisation (anvaya-vyāpti), 'whatever is knowable is impermanent', nor in the contra-positive generalisation (vyatirekavyāpti). 'whatever is not-impermanent is not-knowable', we have any scope of doubt. The violation of 'vyāpti' in either form is easily discernible. When the sense of invalidity is attended by a sense of certitude no doubt about truth or falsity does arise. The positive probans 'prameyatva' is not pervaded by the probandum, 'anit-yatva'. Contrapositively also, the negation of 'anityatva' is not pervaded by the negation of 'prameyatva'. Thus it is a case of 'vyāpyatvāsiddhi' in the sense that the non-pervasibility of the middle term is established beyond doubt.

Now Maṇikaṇṭha takes for examination the second syllo-gism, 'sarvam abhidheyaṃ prameyatvāt' Here too it is not possible to entertain any doubt, because the generalisation is universally assured of its validity in respect of any possible object of the universe. Maṇikaṇṭha comments :—

> ["abhidheyatvānadhikaraṇasya tasya aprasiddhatvāt/ tasmād vyāpteḥ agrahaṇād vyāpyatvāsiddhe eva antarbhavati" —Nyāyaratna. p. 172].

As regards this particular instance the expression 'vyāpteḥ agrahaṇāt' stands for 'vyatirekavyāpteḥ agrahaṇāt'. But the absence of 'vyatirekavyāpti' by itself is not a fault. There are instances of 'kevalānvayivyāpti', such as in—'ghataḥ abhidheyaḥ prameyatvāt', which are regarded as valid, because the general proposition 'whatever is *prameya* is *abhidheya*' is unquestiona-ble, despite the fact that the contra-positive proposition, 'whatever is not-*abhidheya* is not-*prameya*', is unassertible on account of the absence of corresponding negative instances in the world. Thus the mere absence of 'vyatirekavyāpti' cannot account for the fault of 'vyāpyatvāsiddhi'. Maṇikaṇṭha himself is not clear on this point.

Raghunātha's intention is far from what Maṇikaṇṭha means to say. Raghunātha and his followers never mean that the mere absence of 'vyatirekavyāpti' by itself determines the fault of 'anupasaṃhāritva'. What they mean is this. :—when a 'vyatirekavyāpti' is impossible due to the impossibility of any negation of the 'sādhya', the 'pakṣa' and the 'hetu' anywhere in the world, though the 'kevalānvayivyāpti' is unquestionably established, any exercise in syllogistic inference becomes totally fruitless, since the universal major and the conclusion turn out to be the same. Here the absence of 'vyatirekavyāpti' determines the fault of 'anupasaṃhāritva'. It is the reason why 'anupasaṃhāritva' cannot be included in 'vyāpyatvāsiddhi'.

The argument that the first syllogism 'sarvam anityaṃ prameyatvāt' should be included within the fold of 'vyāpyatvāsiddhi', is also untenable. Gaṅgeśa clearly argues that 'vyāpyatvāsiddhi' here depends on 'anupasaṃhāritva' which is defined as 'kevalānvayidharmāvacchinnapakṣakatva'. The disputant looking at the very 'pakṣa', 'sarva', may dismiss the argument on the ground that the 'hetu' in this case is bound to be indecisive, because the 'pakṣa', covering the entire world, leaves no possibility of any co-instance or counter-instance. This is 'anupasaṃhāritva', and the impossibility of 'vyāpti' comes as an afterthought depending on this 'anupasaṃhāritva'. Hence the name of the 'hetvābhāsa' should be fixed after the basic fault. 'Anupasaṃhāritva' is 'upjīvya' (that which is depended upon) and 'vyāpyatvāsiddhi' is 'upajīvaka' (that which depends upon). So Gaṅgeśa observes :—

> ["etena anupasaṃhāritvapratisandhāne yadi vyaptigrahaḥ tadā anumitiḥ eva, tadabhāve vyāpyatvāsiddhiḥ eva iti nirastam, upajīvyatvād iti"
>
> —A.C.G. p. 1748].

Yet the point stands that in this instance one may easily notice the violation of 'anvayavyāpti' without necessarily taking into account the all-comprehensiveness of the minor term. Then how does the breach of 'vyāpti' depend on 'anupasaṃhāritva'? Gaṅgeśa does not make it clear.

What we have said before in our interpretation of Raghunātha's stand on 'anupasaṃhārin' is derived from what we consider to be consistent in this respect. But the masters of neo-logic do not seem to be clear and in agreement as to the proper concept and instance of 'anupasaṃhārin'. Visvanātha in Muktāvalī (under verse 74) rejects the view of the elders (including Gaṅgeśa) to the effect that all-comprehensiveness of the minor term (kevalānvyidharmāvacchinapakṣa) determines the fault of 'anupasaṃhāritva'. Doubt about 'all' being namable does not preclude the absence of doubt about something forming a part of 'all', say a pitcher, which is both knowable and namable. Hence a part of 'all' such as a pitcher may well serve as a co-instance for forming the valid generalisation,—whatever is knowable is namable. The matter may be understood in this way :—I may doubt all men being honest though knowing for certain that some men are honest.

But the supporters of the elders may reply :—The term 'all' in the proposition to be established, namely, 'all are namable' means *everything* in the universe, and so our doubt about all being namable would mean that we doubt everything being namable leaving nothing beyond an all-embracing doubt. In such a case the generalisation 'whatever is knowable is namable' is impossible. But the newer school replies :—

Granted that in such a case the generalisation is inhibited, but it does not prove that it is invalid. One's ignorance or incompetence to entertain a valid proposition does not compromise the validity of the proposition. Moreover in this case it is agreed on all hands that the generalisation is valid. Thus mere all-comprehensive universality of the minor term cannot account for any fault in the inference :—'all are namable, because all are knowable'. Hence the fault of 'anupasaṃhāritva' should be better defined as real impossibility of 'vyatirekavyāpti' due to all-comprehensive universality of one or more terms of an inference.

But all this leaves the basic question unanswered,—if the inference concerned is valid how and why should we call it

faulty ? In this respect the reply of the newer school is not more convincing than that of the elders. Raghunātha is quite conscious of this weakness. He himself raises the question at the conclusion of 'anupasaṃhārin',—If the inhibition of 'vyatirekavyāpti' is the root of the fault what should we do with the 'kevalānvayi' inferences which are accepted to be valid and in which the valid generalisation does not allow any contra-positive transposition due to the all-comprehensive character of the middle term and the major term the negation of which is never and nowhere to be found in the universe ? Take for example the valid inference,—'ghataḥ abhidheyaḥ prameyatvāt' —the pitcher is namable, because it is knowable. Is it vitiated by the fault of 'anupasaṃhāritva' ?

Raghunātha replies :—if the 'anvayavyāpti' or positive generalisation alone is placed by a debater in the syllogistic argument there is no question of blockade of the inference and no question of fault. But if a debater places a 'vyatireka-vyāpti' or contra-positive generalisation, which is impossible in such cases, the fault is definitely there and the inference is blocked by showing up the fault. Such a fault is 'anupasaṃhāritva' and the probans is 'anupasaṃhārin'. This is how Gadādhara explains the import of the following remark of Raghunātha :—

"kevalānvayini tatsambhave'pi anvyavyāptyupādāne nānumitiviroddha". (A.C.G. p. 1764 and 1768).

But this is no answer to the direct question whether the inference 'the pitcher is namable, because it is knowable' is right or wrong, that is, whether "(the pitcher is knowable) implies (the pitcher is namable)" is a valid equivalence or not. If somebody wrongly interprets the validity of this equivalence by showing a 'vyatireka-vyāpti' the fault belongs to the man and not to the equivalence itself. Thus the objection raised against the elders' view becomes valid in respect of the newer school also.

Again, what should we say about the inference,—"sarvam abhideyaṃ prameyatvāt" ? One may be tempted to interpret it as,—"(All are knowable) implies (All are namable)". But

this is nothing but a statement of the major premise :—"Whatever is knowable is namable". Thus the conclusion to be established turns out to be the major premise itself. This is just like saying about the mankind :—"(All are men) implies (All are mortal)", which is nothing but the general proposition, "All men are mortal". So here the point is—how the conclusion of a syllogism can be the major premise of the same syllogism. This point remains unanswered for those who entertain the validity of the inference,—"sarvam abhidheyaṃ prameyatvāt". To escape all this difficulty some writers show an 'anupasaṃhārī' probans by the instance—"sarvam anityaṃ prameyatvāt". Jānakīnātha in Nyāyasiddhānta-mañjarī offers the example,—'ayam ākāśavān dhūmāt',—'this is the locus of space, because it has smoke'. The idea behind it is this,—space is the locus of everything, so something else cannot be the locus of space. After all these complications one is constrained to say that the case of 'anupasaṃhārin' remains indecisive.

CHAPTER—III

VIRUDDHATVA

(Absolute Contradiction of the Major Premise)

'Viruddha' is the fallacy of absolute direct contradiction to 'vyāpti', which shows that the probans is really pervaded by the contradictory of the probandum. This is quite evident in the syllogism—'śabdaḥ nityaḥ kāryatvāt'. The probans 'kāryatva' is pervaded, in fact, by 'anityatva', the contradictory of the probandum, 'nityatva'. 'Kāryatva' and 'nityatva' are antagonistic conceptions. After examining various definitions proposed by others Gaṅgeśa offers some possibly adequate definitions of 'viruddha'. The first definition proposed by him is :—

"sādhyavyāpakābhāvapratiyogitvaṃ viruddhatvam" :—

[The character of being an absolutely contradictory probans is its being the counter-correlate of such a negation as pervades the probandum. 'An effect is not-eternal' is equivalent to 'anything eternal is a not-effect'. 'A is not-B' is equivalent to 'B is not-A'. Thus to say that the probans is pervaded by the negation of the probandum is equivalent to saying that the probandum is pervaded by the negation of the probans. The probandum 'eternity' is thus pervaded by a negation of which the probans, 'being an effect' is the counter-correlate.

In elementary text-books 'viruddha hetu' is defined as 'sādhyābhāvavyāpta'. This is relatively easier to understand, for the statement, 'an effect is eternal' is directly countered by the statement 'an effect is not-eternal'. Contradictory predicables predicated of the same subject directly bring out the contradiction. Yet the higher text-books such as Viśvanātha's Muktāvalī follow the more complicated definition of Gaṅgeśa by stating the equivalent of direct contradiction. We think,

there is a fine logical consideration behind this 'difficult choice'. 'Viruddha' as a 'hetvābhāsa' means a 'viruddha' or contradictory 'hetu'. When we say, 'anything eternal is a not-effect,' we get the contradictory of the 'hetu' itself at the first glance. Thus the contradictory character of the probans itself is more directly brought out by showing that the probandum is pervaded by the contradictory of the probans.

An objection may be raised against showing contradiction by stating the equivalent. A 'viruddha hetvābhāsa' prevents 'parāmarśa', the immediate cause of inference, by contradicting one of its essential elements, the knowledge of 'vyāpti'. To make a false inference possible in this faulty case one requires the following structure of false 'parāmarśa' :—

'nityatvavyāpyakāryatvavān śabdaḥ' (sound is the locus of 'kāryatva' which is pervaded by 'nityatva'). The direct contradictory form of this 'parāmarśa' should be 'anityatvavyāpyakāryatvavān śabdaḥ'. But when we say, 'nityatva' is pervaded by the negation of kāryatva', the contradiction to the original 'vyāpti' and to the consequent 'parāmarśa' is not directly discernible. Let 'A is B' be a false proposition. Then the true proposition is the contradictory, 'A is not-B'. Now 'A is not-B' is equivalent to B is not-A'. 'B is not-A' can contradict 'A is B' only indirecly through the direct contradictory 'A is not-B'. Hence in conformity to the general concept of 'hetvābhāsa', 'viruddha' should be better defined as 'sādhyābhāvavyāpto hetuḥ' than 'sādhyavyāpakābhāvapratiyogī hetuḥ'. Gadādhara raises this objection in the following way :—

> ["hetau sādhyavyāpakībhūtābhāva-pratiyogitvajñānasya vyāptijñānādau grāhyābhāvādyanavagāhitayā pratibandhakatvaṃ na sambhavati iti kathaṃ hetuniṣṭhatādṛśapratiyogitvasya virodharūpatayā siddhānta-praṇayanam ? —Ibid. p. 1777]

The reply to this objection takes the following line :—

'A is B' is equivalent to 'not-B is not-A'. In the same way 'A is not-B' is equivalent to 'not(not-B) is not-A', which is

equivalent to 'B is not-A'. 'B is not-A', by transposition, is equivalent to 'not(not-A) is not-B', which is equivalent to 'A is not-B'. Let B stand for the probandum 'nityatva' and A for the probans 'kāryatva'. Now the original invalid universal major 'whatever is an effect is eternal' is expressed as 'A is B'. Its contradictory is 'A is not-B'. The latter is accepted to be true and the former false. The working out of the deduction may be shown thus :—

I A is not-B
II ≡ not(not-B) is not-A
III ≡ B is not-A
IV ≡ not(not-A) is not-B
I ≡ A is not-B

'I' is the expression for 'nityatvābhāvavyāpya-kāryatva'. 'III', being reduced to 'I', contradicts 'A is B' through the equivalent 'IV'. Not(not-A) stands for the negation of negation of the 'hetu' 'kāryatva'. So it is 'kāryatvābhāvābhāva' in which 'kāryatvābhāva' stands as the counter-correlate of another negation. 'Kāryatvābhāvapratiyogika abhāva' is equal to the positive term, the 'hetu, kāryatva'. 'B is not-A' through the transpositive expression 'not(not-A) is not-B' contradicts 'A is B'. So we say :—'sādhyavyāpakībhūtābhāvapratiyogī hetuḥ', i.e. 'nityatvavyāpakībhūtābhāvapratiyogi kāryatva' (B is not-A), through the negation of negation of 'hetu' 'kāryatva' in the form of transposition, being reduced to 'sadhyābhāvavyāpya hetu' (A is not-B), contradicts 'sādhyavyāpya hetu' (A is B). This follows from the rule that the negation of the pervasive term is pervaded by the negation of the pervasible term :— 'vyāpakābhāvaḥ vyāpyābhāvena vyāpyo bhavati'. This is the law of transposition in Indian logic. This may be otherwise stated as follows :—

When a term is predicated of a subject, the negation of the subject may be predicated of the negation of the predicate. Introducing the concept of implication we may state thus :—'something is eternal' implies 'something is not-

effect.. So 'something is not(not-effect)' implies 'something is not-eternal', i.e.

$(p \supset q) \supset (-q \supset -p)$: here p stands for 'something is eternal' and q for 'something is not-effect',

Raghunātha observes :—

["hetvabhāvasya sādhyavanniṣṭhābhāvāpratiyogitva-jñānaṃ vastutaḥ tatpratiyogikābhāvasya hetoḥ sādh-yasāmānādhikaraṇyagrahaṃ viruṇaddhī

—Ibid. p.1777]

Gaṅgeśa, however, is not satisfied with this definition. That the negation of negation of 'hetu' is pervaded by the negation of 'sādhya' may be logically equivalent to the proposition that the 'hetu' is pervaded by the negation of the 'sādhya'. But the two are not exactly equal, since the concept of the negation of negation is not exactly equal to the concept of a positive term. The positive term may be deduced from negation of its negation, but is not itself the negation, That the positive term is equal to negation of its negation is the view of Udayana who is credited with the dictum :—

"vyāvartyābhāvavattaiva
bhāvikī hi viśeṣyatā/
abhāvavirahātmatvaṃ
vastunaḥ pratiyogitā//

(Nyāyakusumāñjali III/2)

In this view A is equal to not(not-A),—i.e. a term is equal to the negation of its negation. This view is not always accepted by the later logicians. In the negation of the pitcher, the pitcher stands as the counter-correlate of its negation. But in the negation of negation, the primary negation operates as the counter-correlate of the secondary negation. There must be some logical distinction between a negation determined by a positive counter-correlate and a negation determined by a negative counter-correlate. In our concept of negation in which a positive term is negated, the negation does not stand as the counter-correlate of the positive term. In other words, the

positive is not determined by negation. Now if we say that the negation of negation of pitcher is equal to pitcher, the secondary negation, which finally stands for the positive term 'pitcher', is determined by the primary negation which happens to be the counter-correlate of the secondary negation. This violates the concept of negation, since in the final analysis, the positive pitcher indicated by the secondary negation becomes determined by the primary negation of which the pitcher itself figures as the counter-correlate. Apart from this logical inconsistency the equality of a positive term to negation of its negation is also ontologically questionable. An object as a positive content can never be essentially of the nature of a negation (na hi bhāvasvarūpam abhāvasvarūpaṃ bhavitum arhati).

So Gaṅgeśa remarks in his very first paragraph on Viruddha :—"abhāvābhāvaḥ abhāvapratiyoginirūpyatvena bhāvabhinna eva vā",—The negation of negation is something other than the positive, since it is determined by a counter-correlate which is itself a negation. Hence as the contradictory to 'nityatvavyāpya kāryatva' we require 'anityatvavyāpyakāryatva' and not 'anityatvavyāpyakāryatvābhāvābhāvā', i.e., as the contradictory to 'A is B' we require 'A is not-B', and not 'not(not-A) is not-B'. This follows from the logical distinction between 'A' and 'not(not-A)'. 'Not(not-A)' implies or is equivalent to 'A', but not equal to 'A'.

If this position is accepted we find the justification behind Gaṅgeśa's passage to some other definitions of 'viruddha'. Raghunātha himself stands by the definition 'sādhyavyāpakābhāvapratiyogitvaṃ viruddhatvam'. The negation of negation is not something objectively other than the positive counter-correlate. The logical distinction need not call for an ontological distinction. The negation of negation is a logical construction, and is not a reality over and above the positive term. The cognition of 'not(not-A)' also grasps 'A' in the same breath. It is called 'tulyavittivedyatā' or co-apprehensibility under the same apprehension. When we know that 'A' is

different from 'B' we know at the same time that 'B' is different from 'A'. A's difference from 'B' and B's difference from 'A' are co-apprehensibles. Similarly 'A' and 'not(not-A)' are co-apprehensibles.*

Anyway, Gaṅgeśa's reason for passing over to a second definition is that the direct contradiction of 'vyāpti' involves the direct cognition of 'sādhyābhāva' where the 'hetu' is present, and that the negation of the probandum is not directly cognisable in the concept of "sādhyavyāpakābhāvapratiyogitva". Hence to directly attain the contradiction Gaṅgeśa suggests the second definition as,—(1) "sādhyavadavṛttitvam", or (2) "sādhyavadvṛttitvānadhikaraṇatvam", or (3) "sādhyāsamānādhikaraṇadharmatvam", or (4) "sādhyavadvṛttitvānadhikaraṇadharmatvam".

The common essence of all these alternatives is that there is no common locus between the 'hetu' and the 'sādhya'. The concept of 'vyāpti' involves the concept of co-locativity. The knowledge of the total absence of co-locativity directly contradicts the knowledge of 'vyāpti'. This contradiction, in order to grasp the true predicability of the contradictory of the probandum in respect of the probans, should mean that the probans is pervaded by the negation of the probandum.

Now the problem arises regarding the distinction between 'viruddha' and 'savyabhicāra'. The probans existing in a locus along with the absence of the probandum forms the logical foundation of 'savyabhicāra'. If absence of co-locativity between the probans and the probnadum is accepted as the basis of 'viruddha' also, how should we distinguish between the two ? The answer to this question is to be found in the proper understanding of the relation of dependability (i.e., the relation between the *upajīvya*, or the dependable, and the *upajīvaka* or the dependent). Let us take the argument—'parvato vahnimān

* In his Padārtha-tattva-nirūpaṇa, however, Raghunātha supports the view that the negation of negation is something other than the positive ,protiyogin'. (Ptn. p. 55 Benares ed. 1915)

prameyatvāt'. The implied universal major is—'whatever is knowable has fire'. It may be true that the mountain is knowable and has fire. But there are also knowables without having fire. So we cannot say—'If x is a knowable, x has fire for *all* values of x'. But we can say,—'If x is a knowable, x has fire for *some* values of x', and also can say,—'If x is a knowable x has not fire for *some* values of x'. But in 'virudda' which involves an absolute contradiction we cannot say—'If x is a sound, x is eternal for some values of x'. We should say—'If x is a sound, x is not-eternal for *all* values of x', or, 'if x is a sound x is eternal for no value of x'. Thus the difference between the 'viruddha'-contradiction and 'vyabhicāra'-contradiction is to be measured by the logical distinction between 'not for *any* value of x' and 'not for *some* values of x'. The propositional functional assertion 'If x is a sound x is eternal for all values of x' is contradicted by both the functional assertions, namely, (1) 'If x is a sound, x is not-eternal for *some* values of x' and (2) 'If x is a sound, x is not-eternal for *all* values of x'. The latter is an absolute contradiction, while the former is relative and partial to particular values. 'Viruddha' constitutes the absolute contradiction, and as such does not depend on the former. So it is an independent 'hetvābhāsa'. This may be stated in other words in the following way :—

In 'viruddha' the probans and the probandum are reriprocally pervaded by their negations, i.e., the probans is pervaded by the negation of the probandum and the probandum by the negation of the probans. The mere statement of counter-locativity does not point to the 'viruddha hetvābhāsa' which requires *absolute* counter-locativity. This is the reason for Raghunātha's preference for the first definition, 'sādhyavyāpakābhāvapratiyogitva', which is equivalent to 'sādhyābhāvavyāpyatva', and which means that the probans and the probandum can never meet together in the same locus.

At the end of his discussion on 'anupasaṃhārin' Raghunātha demarcates his own view from that of Gaṅgeśa

regarding 'asādhāraṇa' and 'viruddha' with the following remark :—

["idameva ca maṇikṛtāṃ viruddhatvam, itthaṃ ca tadīyam asādhāraṇatvameva viruddhatvam iti"

—Ibid. p. 1764]

Gaṅgeśa's concept of 'asādhāraṇatva' is the same as Raghunātha's concept of 'viruddhatva,' and again Gaṅgeśa's concept of 'viruddhatva' is the same as Raghunātha's concept of 'asādhāraṇatva.' As we have seen before, Gaṅgeśa's final defiinition of 'viruddha' settles down to the concept of 'sādhyā-samānādhikaraṇahetutva'. But according to Raghunātha this is, properly speaking, the character of 'asādhāraṇa hetvābhāsa'. Hence Viśvanātha in his Muktāvalī, following Raghunātha, defines 'asādhāraṇa' as 'sādhyāsamānādhikaraṇo hetuḥ'. As we noted before, the proper instance of 'asādhāraṇa' should be 'śabdaḥ nityaḥ śabdatvāt', and not 'śabdaḥ anityaḥ śabdatvāt'. The new school led by Raghunātha considers 'asādhāraṇa' to be an absolute fault (nityadoṣa). In that case it is easy to see why 'śabdaḥ nityaḥ śabdatvāt' should be the proper instance of 'asādhāraṇa', and not 'śabdaḥ anityaḥ śabdatvāt'. The concept of 'sādhyāsamānādhikaraṇahetutva' squarely fits into the former instance. The probans 'śabdatva' cannot belong to any locus having the probandum 'nityatva'. The absence of a common locus means the total absence of co-locativity between the probans and the probandum. Of course, the distinction from 'viruddha' is constituted by the fact that the 'asādhāraṇa' probans does not exist in any other locus than the minor term itself.

Gaṅgeśa's definition of 'asādhāraṇatva' as 'sapakṣavyāvṛttatva' finally turns out to be the same as 'sādhyavyāpakābhāvapratiyogitva'. If the probans is excluded from all possible co-instances where the probandum exists, and if the probandum's existence in the minor term is a matter of doubt, one is reasonably permitted to cognise that the probandum is is pervaded by the absence of the probans, which is equivalent to the cognition that the probans is pervaded by the absence of the probandum.

One may argue that the absence of co-locativity may be shown to be the same as the probandum being pervaded by the absence of the probans, or as the probans being pervaded by the absence of the probandum. But this can be shown only by deduction or reduction. Yet the *concept* of the negation of co-locativity is not the same as the *concept* of the one term being pervaded by the negation of another term. Let us take the following two pairs of statements :—

$$\text{I}\left\{\begin{array}{l}\text{A is fire}\\ \text{A is water}\end{array}\right\} \text{ and II}\left\{\begin{array}{l}\text{A is fire}\\ \text{A is not-fire}\end{array}\right\}$$

The two statements in the first pair can be called contradictories by virtue of the fact or state of things that fire and water cannot be predicated of the same subject. It is a factual contradiction called 'sahānavasthāna' or negation of co-existence in the same locus. It is not, however, a *logical* contradiction. It is not *logically necessary* that he who takes something to be fire cannot take it to be water. It is not conceptually impossible to predicate the both of the same subject. But the contradiction between fire and not-fire is a logical contradiction in the sense that it is not possible to conceive the both as being predicated of the same subject. It becomes more clear when we take the two statements 'A is B' and 'A is not-B'. To grasp the contradiction we need not appeal to our sense of facts. Even without knowing what A or B stands for as concrete object-values in the world of facts, we logically intuit the contradiction which flows from the very nature of any possible knowledge. It belongs to the very structure of knowledge that one cannot entertain in the same breath the propositions,—'A is B' and 'A is not-B'.

Now the concept of negation of co-locativity (asāmānādhikaraṇya) does not give us the sense of *logical* contradiction which is '*jñānagata virodha*' or contradiction in knowledge itself. We think that this reason accounts for Raghunātha's preference for the definition of 'viruddha' as 'sādhyavyāpakābhāvapratiyogī hetuḥ' which means that the probandum is pervaded by the *not-probans*. The probans is contradictory

to that which pervades the probandum. This gives us the equivalent 'sādhyābhāvavyāpyahetuḥ'—the probans is pervaded by the *not-probandum*. From this the contradictory character of the probans itself is obtained by deduction that we have shown before. If 'A' is the probans and 'B' the probandum, in the statement of contradiction 'B is not-A' in deduced from 'A is not-B' and vice-versa. We have suggested before that in order to directly get at the contradictory character of the 'hetu' itself Raghunātha has preferred the definitive statement : 'sādhyavyāpakābhāvapratiyogi-hetuḥ viruddhaḥ' :—The 'viruddha' probans is such as the contradictory (negation) of which is truly predicated of the probandum.

We may understand the 'viruddha hetvābhāsa' in another way. In modern logic we are familiar with the relation of transitive predication—If 'A is B' and 'B is C', then 'A is C'. In the terminology of Indian logic we may state it thus :—If A is pervaded by B and B is pervaded by C, then A is pervaded by C :—'vyāpakasya vyāpakaḥ vyāpyasya vyāpakaḥ'. Let us now state the following :—'A is B' and 'B is not-A'. The transitive predication requires the conclusion 'A is not-A' which is plainly absurd. But 'B is not-A' is true by agreement. So 'A is B' is false. An effect is assumed to be pervaded by eternity. But eternity is accepted as being pervaded by not-effect. The transitive pervasion requires that effect should be pervaded by not-effect, which is absurd. So 'effect is pervaded by eternity' is false.

But in fairness to Gaṅgeśa it must be said that Raghunātha is not fair in his suggestion that Gaṅgeśa does not stand by his first definition,—'sādhyavyāpakābhāva-pratiyogitvaṃ viruddhavam'. That this definitive concept of 'viruddhatva' is well up in his mind is clear from the following observation in the concluding portion of his discussion on 'viruddha'.

> ["sa cāyaṃ vidhisādhane trividhaḥ—sākṣāt sādhyābhāvavyāpyatvāt, sādhyavyāpakābhāvavyāpyatvāt, sādhyavyāpakaviruddhopalambhāt"—Ibid. p. 1779]

The first notion may be illustrated in the instance :—A is B, because A is not-B (the mountain has smoke, because it is truly not-recognized as having smoke). The implied general proposition is :—'not-B is B'. This is absurd. Here the contradiction is internal to the proposition itself, i.e., the proposition stands self-condemned. The palpably self-contradictory predication is meant by the expression 'sākṣāt sādhyābhāva-vyāpyatva'.

The second notion may fit iuto the following instance :—'A is B, because A is not-C' (the mountain has smoke, because it has not-fire). The implied universal major is 'not-C is B'. But it is agreed that 'B is C' (That which has smoke has fire). Hence the universal major is false. The probans 'not-C (not-fiery) turns out to be the contradictory of C which is universally predicated of B.

The third notion may be explained by the following argument :—A is B, because A is C (the lake has smoke because it has water). The implied 'vyāpti' is 'C is B' (that which has water has smoke). But we truly know that B is D (that which has smoke has fire), and we also know for certain that C is not-D (that which has water has not-fire). If 'C is B' and 'B is D' are true, then transitive predication requires that 'C is D' must be true. But since we truly know that C is not-D, i.e., 'C is D' is false, and 'B is D' is true, it follows that 'C is B' is false. Raghunātha remarks :—

["na ca etāni dharmivibhājakāni eva, sarveṣām eva sādhyābhāvavyāpyatvena ekavidhatvāt :—These separate notions are not to be entertained as forming separate sub-classes of 'viruddha'. All these notions finally rest on one basic concept of 'sādhyābhāvavyāpyatva', and so 'viruddha' is really of one type permitting no sub-division—Ibid. p. 1782].

Despite this Raghunātha thinks that Gaṅgeśa's own notion of 'viruddhatva' rests on the concept of 'sādhyāsamānādhikaraṇahetutva' (Raghunātha's own view of 'asādhāraṇatva'), and not on the concept of 'sādhyābhāvavyāpyatva'. Raghunātha

deduces this position of Gaṅgeśa simply from the fact that in his formulation of the conclusive definition Gaṅgeśa offers a second series of definitions based on the concept of 'sādhyāsamānādhikaraṇahetutva' (Ibid. p. 1775).

A pure and exclusive instance of 'viruddha' is hardly possible to find. It always comes in association with other faults. Raghunātha remarks that 'viruddha' is invariably associated with either 'bādha' or 'svarūpāsiddhi'. Asssociation of other faults is also noticeable sometimes. But a single instance exhibiting many faults should not present any difficulty,, since the different concepts of different faults are clearly demarcated from one another.

Chapter IV

SATPRATIPAKṢATVA (ANTINOMY)

Section—I

THE TRADITIONAL NYĀYA-VIEW

In the Nyāyasūtras 'satpratipakṣa' is termed 'prakaraṇa-sama' which has been defined as—"yasmāt prakaraṇacintā sa nirṇayārtham apadiṣṭaḥ prakaraṇasamaḥ (NS 1 2 7). The term 'prakaraṇa' has been defined by Vātsyāyana :—

"vimarśādhiṣṭhānau pakṣapratipakṣau ubbau anavasitau prakaraṇam"

Someone places the proposition 'A is B'. The opponent places the counter-proposition—'A is not-B'. If A is the minor term and B the major term of the first proposition, the second proposition shows that the negation of the probandum may be predicated of the same minor term. The minor term, having these two contradictory positions in which truth or falsity has not been ascertained in respect of either, is reduced to to both 'pakṣa' and 'pratipakṣa'. In the proposition 'A is B' the minor term 'A' is 'pakṣa' or the subject of predication of the probandum 'B'. In the contradictory proposition, 'A is not-B', the same minor term appears as the subject of predication of the negation of the original probandum. Thus the same minor term is turned into its own opponent or 'pratipakṣa'. The minor term suffers from self-opposition due to contradictory predications. Hence Viśvanātha in his commentary on the Nyāyasūtras (1 2 7) explains thus the meaning of Vātsyāyana's observation :—

> "prakaraṇaṃ pakṣapratipakṣāviti bhṣāyam sādhya-tadabhāvavantau ityarthaḥ".

The minor term is thus 'vimarśādhiṣṭhāna' or substratum of doubt in the sense that it may or may not have the predication

of the probandum. The two propositions 'A is B' and 'A is not-B' are counter-poised in such a way that neither of the disputants feels sure about his position. The doubt about the subject (pakṣa) in relation to the probandum or the absence of the probandum remains unresolved, and so neither of the propositions can be established as a definite conclusion. The purpose of the opponent is, however, served even if he is not interested in establishing his own proposition, but only in resisting the proposition of the first disputant through creating confusion.

Let the first syllogism stand thus :—'A is B' because 'A is C'. The implied 'vyāpti' :—'C is B'. The opponent places the counter-syllogism 'A is not-B', because A is D'. The implied 'vyāpti' is :—'D is not-B'. Here the middle term of the first syllogism, namely, 'C', is countered by the middle term of the second syllogism, namely, 'D', which seeks to establish the negation of the probandum of the first syllogism. Between the two positions, the presence and the absence of the probandum (i.e., 'B' and 'not-B') in respect of the same minor term, both the middle terms 'C' and 'D', are neutralised through mutual opposition. In this sense the original middle term 'C' is called 'prakaraṇasama'. Between 'pakṣa' and 'pratipakṣa', i.e., 'A is B' and 'A is not-B' both the middle terms stand helpless. Hence the 'hetu' is called 'prakaraṇasama', for it is as indecisive as the two inconclusive positions, 'pakṣa' and 'pratipakṣa' i.e., the two propositions 'A is B' and 'A is not-B'.

The middle term 'C' is also called 'satpratipakṣa' or 'satpratipakṣita', because its function has been succesfully obstructed by the counter-probans 'D'. If the second syllogism is placed by the first disputant and the first by the second disputant, the middle term 'D' will be equally called 'satpratipakṣa' by virtue of its being countered by 'C'.

It may be argued, as it has been done by the Buddhists, that of the two propositions, 'A is B' and 'A is not-B' one must be true and the other false by the laws of contradiction

and excluded middle. In that case the two syllogisms cannot have the same truth-value and so cannot be of the same strength. Thus mutual elimination through mutual opposition is impossible since the true proposition cannot be eliminated by the false one.

In reply to this contention, the Naiyāyikas argue that in 'satpratipakṣa' the perplexed disputants are not logically equipped to locate logical falsity in either of the opposing propositions. It is logically true that between 'A is B' and 'A is not-B' one must be true and other false. Yet the counter-syllogism of the opponent lands the first disputant in such a confusion that he is not in a position to fix falsity on either of the contending propositions. Thus when both the propositions are 'agṛhīta-aprāmāṇyaka' (i.e., of which the falsity of neither is ascertained) the result is mutual inhibition of inference, and the disputant's case is lost in the debate. This reply of the Naiyāyikas only serves to bring out the force of the Buddhist contention that 'satpratipakṣa' is not a *logical* fallacy. Ignorance or confusion leading to psychological incapacity to fix any truth-value does not point to the logical falsity of a proposition. We propose to discuss the Buddhist standpoint at length later on.

As an instance of 'satpratipakāṣa' Vātsyāyana and Uddyotakara cite the following :—

The Mīmāṃsaka proposes the syllogism :—'nityaḥ śabdaḥ anityadharmānupalabdheḥ' (sound is eternal, because the features of impermanence are not discernible in it). The Naiyāyikas place the counter-syllogism :—'anityaḥ śabdaḥ nityadharmānupalabdheḥ' (sound is not-eternal, because the features of permanence are not discernible in it). The Naiyāyikas think that a sound is created. So a word as a sound is newly created by articulation. Thus it is impermanent. The Mīmāṃsakas think that the word is not produced, but only revealed by articulation. Thus it is eternal. The two counter-syllogisms, as they stand, cannot decide anything unless it can be decided first whether the sound is created or an already existent sound is revealed. So the first debate should have centred round the opposite view-points of

production and revelation. Without settling this debate first the two counter-syllogisms under consideration cannot decide anything. This indecision results in non-ascertainment of falsity in either way. According to the Nyāya view, in 'satpratipakṣa' there are *two* counter-syllogisms and *two* counter probans of equal strength, respectively seeking to establish the probandum and the absence of the probandum in respect of the same minor term. Equality of strength is accounted for by the equal non-ascertainment of falsity regarding both the contradictory positions. Hence Udayana remarks in his Tātparyaṭīkā-pariśuddhi :—

> "tathā hi pakṣe samabalabādhakasahapravṛtteḥ na tattvanirṇayaḥ, pratibalena pratiruddhatvāt"
>
> —(N. D. Mithilā ed. Pt. I. p. 655)

Let us now come to the notion of 'satpratipakṣa hetvābhāsa' as it has been interpreted and developed in neo-logic led by Gaṅgeśa. Gaṅgeśa defines 'satpratipakṣatva' as :—

> ["sādhyavirodhyupasthāpanasamartha-samānabalopasthityā pratiruddha-kāryaliṅgatvam" (A.C.G. p. 1787)

A 'satpratipakṣa' is being such a probans as the operation of which is inhibited by the presence of a counter-probans having equal strength and having thus the capacity to introduce the contradictory of the probandum]

Here 'bala' or strength stands for 'vyāpti' and 'pakṣadharmatā'. The Mīmāṃsaka places the syllogism :—

Whatever is audible is eternal, e.g., soundness.
A word is audible.
Therefore, a word is eternal.

The Naiyāyika places the counter-syllogism :—
'Whatever is an effect is not-eternal, e.g., pitcher.
A word is an effect
Therefore, a word is not-eternal.

Raghunātha interprets the purport of Gaṅgeśa's definition thus :—

> ["sādhyasya sādhysiddheḥ virodhinyāḥ pakṣaḥ na sādhyavān ityādyupasthiteḥ, sādhyavirodhī sādhya-

vattājñānapratibandhakajñāna-viṣayaḥ bādhaḥ sādhyābhāvādiḥ tadupasthiteḥ vā jananayogyayā samānayā balopasthityā tathāvidha-vyāptyādibuddhyā pratiruddhaṃ kāryaṃ yasya tādṛśaliṅgatvam ityarthaḥ (Ibid. pp. 1787-1788)]

In 'satpratipakṣa' the counter-probans of the counter-syllogism is intended to produce a stalemate. At a certain stage of the debate the opponent may not be interested so much in establishing his own position as in stalling a decision going in favour of the first disputant. In Gaṅgeśa's definition and Raghunātha's interpretation thereon the term 'kārya' stands for the conclusive inference. That the operation of the probans is checked means that the probans cannot lead to the original conclusion. The very possibility of this check implies that the premises of the counter-syllogism cannot be proved as false by the first disputant who is too confused to question them.

Gaṅgeśa in his definition has not expressly stated the condition, 'agṛhīta-aprāmāṇyaka', because, as it is interpreted by Raghunātha, the non-ascertainment of falsity is implied by the expression 'kāryapratirodha' (check to the production of the effect, i.e., the inferential conclusion). Raghunātha remarks :—

["virodhivyāptyādiviṣayatvalakṣaṇa-yogyatāśālinyā api upasthiteḥ aprāmāṇyagrahe satpratipakṣatvāsampādakatvāt kāryapratirodhānudhāvanam"

—(Ibid p. 1788)]

Since the non-ascertainment of falsity of the premises in both the counter-syllogisms is a condition of the stalemate, this should have better been stated expressly in the definition. Then 'kāryapratirodha' would have simply followed by implication. This seems to be the view of Raghunātha. A further improvement on Gaṅgeśa's definition is suggested by Raghunātha on the following line :—

The inference is not the direct result of the knowledge of the probans, but of 'parāmarśa'. Hence the equality of strength of the two counter-syllogisms means non-ascertainment of falsity

of the two contradictory 'parāmarśas' which simultaneously invade the mind of the disputant. Thus remarks Raghunātha :—

["samānatvaṃ ca agṛhītāprāmāṇyaka-sādhyasiddhy-aupayika-parāmarśakālīnatvam: asati, gṛhītāprāmāṇyake vā parāmarśe satpratipakṣitatvavyavahāravirahāt—Ibid.]

He makes his meaning more clear in a further observation :— ["agṛhītāprāmāṇyakatvasaṃvalitayogyatopādāne tu bādhopasthitisamartha-parāmarśakālīnasādhyasiddhisamarthaparāmarśaviṣyatvaṃ vācyaṃ tattvam"—Ibid. p. 1793]

—If the capacity for producing a stalemate is limited to non-ascertainment of falsity, this non-ascertainment passes on to the stage of 'parāmarśa', and the definition of 'satpratipakṣa' may be understood this way :—"A 'satpratipakṣa' probans is that which is the object of a 'parāmarṣa' having the capacity to establish the probandum, that 'parāmarśa' being present in the mind of the disputant simultaneously along with another 'parāmarśa' having the capacity to present the contradictory of the probandum". In this way the two 'parāmarśas' themselves become contradictory and the disputant is not in a position to entertain the falsity of the either.

Raghunātha here makes an excellent point against a doubtful interpretation of 'satpratipakṣa' given by Pakṣadharamiśra. Pakṣadhara suggests that equality of strength means equal ascertainment of truth of the two contradictory 'parāmarśa s'. Gadādhara explains :—

["ubhayaparāmarśe prāmāṇyaniścayadaśāyām ubhayānumitipratirodhanirvāhaḥ"—Ibid. p. 1793].

Pakṣadhara wrongly thinks that both the counter-inferences are reciprocally inhibited by taking both the contradictory 'parāmarśas' as true. He appears to point out the possibility of such a psychologically confused position as in which both the contradictory 'parāmarśas' appear as true to the disputant. The disputant is equally conscious that such a position is logically absurd. The net result is the mutual cancellation of the two contradictory conclusions.

But it is difficult to surmise the possibility of such an absurd position. Pakśadhara's interpretation would mean that the disputant at the first stage entertains the truth of both the contradictory propositions, (1) 'A is B which is C' and (2) 'A is D which is not-C'. At this stage he cannot discern the contradiction. Otherwise the very entertainment of truth of the both would have been impossible. But the contradiction flashes into his mind as soon as he comes upon the implied contradictory conclusions, 'A is C', and 'A is not-C'. Here he can no longer take the both as true, nor can decide which is true or which false, and the consequence is a psychological stalemate.

Raghunātha does not think it proper that, in 'satpratipakṣa', inhibition of inference requires of the disputant to take the contradictory 'parāmarsas' as true. It is enough if only the falsity remains unascertained. Neither the one nor the other 'parāmarśa' decisively appears as false to the disputant. The reason for this has been explained by Raghunātha himself :— "vyabhicāreṇa prāmāṇyagrahasya abalatvāt—Ibid. p. 1792.

This refers to the Nyāya theory of "parataḥ prāmāṇya". In this theory knowing a proposition and knowing its truth are not the same. In other words, validity of a cognition is not cognised along with the cognition itself. The two propositions, (1) 'A is B' and (2) '(A is B) is true' are completely different. The first proposition belongs to the primary plane and the second to the secondary. The Naiyāyikas here recognise a hierarchy of propositional cognitions. The validity of knowledge is not grasped even by retrospection (anuvyavasāya), i.e., knowledge of knowledge. It is grasped by inference. The Advaitins and the Mīmāṃsakas advocate the theory of "svataḥ prāmāṇya" or the self-evident validity of cognition. There are subtle differences in the respective positions of Prabhākara, Kumārila and Murārimiśra. The positions of Prabhākara and the Advaita are identical in this respect. Anyway we are not here concerned with the subtle shades of differences among the 'svataḥ-prāmāṇyavādins', nor with the long debate between 'svataḥ-prāmāṇyavāda' and 'parataḥ-prāmāṇyavāda'. It is

enough for our purpose to roughly understand the implication of 'parataḥ-prāmāṇyavāda' in the context of 'satpratipakṣa'.

In accordance with this theory, when the disputant entertains the 'parāmarśa' he cannot entertain its validity at the same time. In that case, because the invalidity of 'parāmarśa' also is not entertained, an appropriate inference may follow forthwith without waiting for the validity of 'parāmarśa' to dawn upon the mind. Anyway, there is surely a logical distinction between falsely entertaining two contradictories as true and falsely not-entertaining either of the contradictories as false. In the second case the disputant knows in a general way that one 'parāmarśa' must be false, but does not know which one is so. Hence the contradictory conclusions themselves are blocked by reciprocally unsettled contradictory 'parāmarśas'.

Section—II

THE VIEW OF RATNAKOṢAKĀRA

The author of Ratnakoṣa is credited with the striking theory that in 'satpratipakṣa' two counter-syllogisms do not lead to mutual inhibition of two counter-conclusions, but to actual generation of two conclusions in the form of doubt. According to the accepted view, when the disputant is confronted with two contradictory 'parāmarśas' between which he is not in a position to choose or fix falsity on either, the element of doubt resulting from the confrontation prevents the very possibility of any conclusion. The author of Ratnakoṣa, however, contends that is such a case the conclusion itself cannot be totally prevented. Rather the doubt itself should then pass into the cognitive structures of the conclusions. One 'parāmarśa' leads to the conclusion 'A is C' and the other to 'A is not-C'. Neither of the 'parāmarśas' is taken as false. So the resulting conclusions themselves should take the nature of doubt :—'A is C' or 'A is not-C'? Now, "(A is C) or (A is not-C)" is true as

one composite disjunctive proposition. But the point of debate is not the truth of the disjunction itself, but of the truth or falsity of *the members of the disjunction.* Both the conclusions coming after the contradictory 'parāmarśas' figure in cognition, but only in the form of indecision, and not in the form of affirmation. According to the accepted view, the very contradictory nature of the 'parāmarśas' does not permit the disputant to go upto the length of cognising the conclusions. But in the view of Ratnakoṣakāra, since the 'parāmarśas' themselves are not accepted as false, there is nothing to debar the cognition of opposite conclusions in the form of a disjunctive doubt. The doubt coming afterwards as a result of confrontation between the two contradictory 'parāmarśas' must be deposited in the conclusions themselves. The result is a wavering between the two contradictory possibilities, 'A is C' and 'A is not-C'. So the two conclusions together take the form of doubt. In the other view, there is no question of wavering in the stage of conclusion, because the process of reasoning itself gets stagnated just with the figuring of two opposite 'parāmarśas' in one collective super-synthetic knowledge, and there is no opportunity of going upto the conclusion.

According to Ratnakoṣakāra the doubtful nature of each conclusion does not arise separately from each separate 'parāmarśa', but from the combination of contradictory 'parāmarśas'. Gaṅgeśa explains :—

> ["pratyekāddhi utpadyamānaṃ jñānam arthāt
> saṃśayaḥ, na tu pratyekaṃ saṃśayajanakatvam"
> —Ibid p. 1804]

Ratnakoṣakāra does not recognise it as a general truth that the cognition of *contradictory* predication necessarily prevents the very cognition of the *contradictable* predication. In other words, what is prevented is the affirmation of truth, but not the possibility of doubt. Otherwise doubt itself would have been an impossible psychological phenomenon. Doubt means wavering between two opposite poles which must figure somehow together in a single cognitive structure to make doubt possible at all.

A jaundiced person knows quite well that a conch-shell is not yellow. Yet at the same time in visual perception he cognises it as yellow. The jaundiced person cannot assert that the conch-shell is yellow. Thus when, even an *assertive* contradictory predication cannot prevent the *non-assertive* predication of yellowness in relation to the conch-shell, there is no reason why one *non-assertive* contradictory predication should necessarily prevent another *non-assertive* contradictable predication.

In our opinion Ratnakoṣakāra is justified in his contention. In 'satpratipakṣa' we are not strictly concerned with a *logical* fallacy, but with a psychological indecision resulting from a logical contradiction. Gaṅgeśa, we think, here cleverly confuses between the two when he observes :—

> ["sādhyatadabhāvayoḥ virodhena yathā ekajñānasya aparadhīpratibandhakatvaṃ tathā sādhyābhāvavyāpyavattvasyāpi sādhyavirodhitvāt tadbuddheḥ api sādhyadhīpratibandhakatvāt, virodhitvajñānasya pratibandhakatve tantratvāt"
>
> —Ibid. p. 1804]

What Gaṅgeśa means is this :—'A is C' and 'A is not-C' are contradictory propositions. The knowledge of the one prevents the knowledge of the other. Just as the proposition, 'A is not-C'' contradicts the propositions 'A is C', so also does the proposition 'A is D which is not-C'. In a similar way the proposition 'A is B which is C' contradicts the proposition 'A is not-C'. Thus the two contradictory 'parāmarśas' cancel the possibility of both the alternative conclusions. Clearly here Gaṅgeśa takes contradiction in the *logical* sense. He is *logically* justified. But what about the fact of doubt in which two contradictories must figure in the same composite cognitive structure ? Here mutual cancellation would cancel the very possibility of doubt as a psychological fact. If I cannot really fix the truth-value on either of the contradictory 'parāmarśas' how can I prevent the resulting doubt from passing into the conclusion in the form of an undecided disjunction ? So in 'satpratipakṣa' we get an

unasserted doubtful conclusion, but not the total absence of conclusion. The fallacy of 'satpratipakṣa' vitiates inference by virtue of raising doubt :—

["viruddhobhayajñānasāmagryāḥ saṃśayajanakatvāt saṃśayadvārā asya dūṣakatvam"

—Gaṅgeśa (Ibid. p. 1804)]

Gaṅgeśa's position against Ratnakoṣakāra may be summarised thus following Raghunātha's way of interpretation :—In 'satpratipakṣa' two counter-'hetus' are involved. Direct concradiction between two 'hetus' mean 'parasparābhāvavyāpyatva'. If 'B' and 'D' are accepted as two contradictory 'hetus' this would mean :—'B is not-D' and 'D is not-B', i.e., reciprocal predication of receprocal negation. But when we say :—'A is B which is C' and 'A is D which is not-C' we do not get the contradiction directly. The contradiction is obtained through a process of deduction. We deduce from the above that, 'A is C' and 'A is not-C'. But the direct contradiction between the 'hetus' 'B' and 'D' is not obtained thereby. From 'B is C' and 'D is not-C' we get 'B is not-D' and 'D is not-B'. Before going through this long process of deduction we cannot get the contradiction between the two counter-'hetus'.

So the 'vādin' and the 'prativādin', the first debater and his adversary, have two opposite 'parāmarśas' which respectively come upon them with a force of assertion. The neutral adjudicator takes note of these two asserted 'parāmarśas'. He too at the outset comes under the force of assertion, but soon sees through the contradiction. He then pronounces the judgment that the conclusion is blocked, since the two 'parāmarśas' are interlocked in an opposition with equal strength. It may be that the adjudicator himself is invaded by doubt without being able to decide either way, or it may be that the disputants themselves pass from the stage of assertion to that of doubt. But anyway, here the doubt depends on contradictory assertions which on account of equal strength cannot lead to a decision. So the fault here does not lie in the resulting doubt, but in the blocking of decision due to the interlocking of two 'parāmarśas'

in an opposition with equal strength. Here the doubt is the dependent (upajīvaka) and the contradictory nature of the 'parāmarśas' blocking the decision is the dependable (upajīvya). The fault is constituted by the *upajīvya* element, and we need not run upto the *upajīvaka* element for finding the fault.

Nevertheless it is clear that Gaṅgeśa does not do away with the possibility of doubt. Now a vital question arises in this context. When either the disputants or the adjudicator or the both come to realise that no decision is possible between 'A is C' and 'A is not-C', what is this indecision without partaking in the nature of doubt ? It is absurd to say—'I do not doubt, but I cannot decide'. One may indeed say—I do not doubt that "either 'A is C' or 'A is not-C'', but cannot decide which one is true or which false. Here too there is definite doubt pertaining to the fixation of truth or falsehood in respect of either of the propositions.

There is another problem. According to the Nyāya-Vaiśeṣika theory of knowledge the mind cannot simultaneously entertain two different cognitions (yugapad jñānānutpattiḥ manasaḥ liṅgam—Ns. 1 1 16). To realise that a decision is blocked it is necessary to take the two contradictory 'parāmarśas' simultaneously into consideration. Otherwise one cannot be weighed against the other. But two 'parāmarśas' are two different cognitions, then how do these two cognitions monopolise the mind at the same moment ? This is theoretically impossible.

Both Maṇikaṇṭha and Gaṅgeśa try to solve the problem by resorting to the notion of collective cognition (samūhālambanātmakajñāna). For the sake of realising the mutual opposition the two 'parāmarśas' do not enter the mind as two separate cognitions, but as one collective cognition. In that case, we think, this collective cognition itself should be of the nature of doubt. Otherwise two *contradictories* cannot constitute *one* cognition. The cognition, 'it is a post or a man' means :—it may be a post or may be a man'. Similarly two contradictory 'parāmarśas', simultaneously invading the mind and forming one collective cognition, should take the form :—"A may be

B which is C or may be D which is not-C" The concluding doubt takes the form :—'A may be C or not-C'. If it is assumed that two contradictory propositions can be collectively entertained in a cognition without taking the nature of a doubt, then the only alternative left is that such a collective cognition is of the nature of 'āhāryajñāna'. But the Naiyāyikas do not admit 'āhāryajñāna' beyond the domain of perception. Hence the two contradictory 'parāmarśas' constituting one composite cognition must constitute the structure of doubt.

It is admitted that placing of only one syllogism cannot generate doubt. Hence two separate 'parāmarśas' taken separately cannot lead to doubt. When the two are balanced together the result is the emergence of an enquiry as to which way the truth does lie. 'Satpratipakṣa' is the presence in understanding of two 'vyāptis' and two 'pakṣadharmatās' (two major premises and two minor premises) in such a way as generates an enquiry of the form :—between the two 'hetus' related to two 'sādhyas' which is the correct one ? So Gaṅgeśa writes :—

> ["tathā ca prakṛtasādhyahetvoḥ kiṃ tattvam iti jijñāsājanikā vyāptipakṣadharmatopasthitiḥ prakaraṇasamaḥ" —Ibid. p. 1822]

It is difficult to understand how the need of an enquiry can be felt without doubt. The doubt is underlined by the very nature of the question shown by Gaṅgeśa himself :—what is the truth ? Between two contradictory positions one must be true, but which one is so cannot be decided. Truth lies this way or that way in the sense of exclusive disjunction. Hence any enquiry in this regard can proceed only from the indecision which is equivalent to doubt.

The later neo-logicians deduce the simple definition of 'satpratipakṣa',—"sādhyābhāvavyāpyavān pakṣaḥ satpratipakṣaḥ" from Raghunātha's discussion on Gaṅgeśa's conclusive definition (Muktāvalī on Kārikā 71 and A. C. G. p. 1787).

According to this definition the fault of a 'satpratipakṣa' probans is constituted by the minor term of which is predicated a counter-probans that is pervaded by the negation of the original probandum. In this conception of 'satpratipakṣa' the two counter-'parāmarśas' reciprocally constitute the fault of both the counter-syllogisms. Let us take the two counter-'parāmarśas' 'A is B which is C' and 'A is D which is not-C'. In relation to the second 'parāmarśa' the minor term 'A' has the predication of the counter-probans 'D' which is pervaded by 'not-C', the negation of the first probandum. In relation to the first 'parāmarsa' the same minor term 'A' has the predication of the first counter-probans 'B' which is pervaded by the negation of the second probandum 'not-C' [i.e., 'not(not-C)' is equal to C which is the probandum in the first parāmarṣa]. In this view each of the two counter-syllogisms is considered to have the fault of 'satpratipakṣa', and each constitutes the fault of the other by having a counter-probans and a counter-probandum in relation to the same minor term. As a result the minor term becomes opposed to itself.

By this interpretation of the definition we get the line of demarcation between 'viruddha' and 'satpratipakṣa'. In 'viruddha' there is no counter-probans. The same probans as is predicated of the minor term is really pervaded by the negation of the assumed probandum. The probans, which is really capable of establishing the negation of the probandum, is wrongly employed to prove the presence of the same probandum. In 'satpratipakṣa' on the other hand, a counter-probans, in relation to the same minor term, is intended to establish the the negation of the probandum that has been predicated of the first probans. Hence Viśvanātha observes :—

> ["satpratipakṣe tu pratihetuḥ sādhyābhāvasādhakaḥ, atra tu eka eva hetuḥ iti viśeṣaḥ, sāhhyābhāva-sādhaka eva sādhyasādhakatvena upanyastaḥ iti aśaktiviśeṣopasthāpakatvāt ca viśeaṣh"—Muktāvalī on Viruddha under Kārikā 71].

Section—III

DHARMAKĪRTI ON SATPRATIPAKṢA

It is well-known that the Naiyāyikas accept 'asatpratipakṣatva' or 'the absence of a counter-probans', as a necessary characteristic of a correct 'hetu'. In Hetubindu of Dharmakīrti 'asatpratipakṣatva' is otherwise called "vivakṣitaikasaṃkhyatva' which means that a correct probans is one without having a counter-probans. Between the probans and the counter-probans only one can be correct, but not both. Dharmakīrti contends that it is needless to mention this as a characteristic of correct 'hetu', and so 'satpratipakṣa' should not be mentioned as a separate fallacy of the middle term. Either 'A is C' is true, or 'A is not-C' is true, but not both. This is the implication of the law of contradiction which is stated in the oft-quoted Buddhist dictum—'bhāvānām advirūpatā'. Arcaṭa explains this in Hetubindutīkā :—

["bhāvānāṃ viruddhasvabhāvadvayāyogāt virddhadharmādhyāsasya bhedalakṣaṇatvāt"—Gkw. ed. p. 214].

The same term cannot have two contradictory predications, because in that case the subject cannot remain one, but must become two. This is the explanation of Dharmakīrti's generalisation :—'yad varuddhadharmādhyastaṃ tan nānā'—That which has contradictory predications must be many. So 'A' could not have retained its identity if both 'C' and 'not-C' could be predicated of it.

Now in two counter-syllogisms resulting in two contradictory conclusions, 'A is C' and 'A in not-C' let us not question the minor premises 'A is B' and 'A is D'. In that case from the statement of the exclusive disjunction namely, 'either (A is C) or (A is not C) is true', we are compelled to deduce :— 'Either (B is C) or (D is not-C) is true' in the sense of exclusive disjunction, for 'A is C' is deduced from 'A is B which is C'

and 'A is not-C' is deduced from "A is D which is not-C". Let us clearly state the two counter-syllogisms :—

(1) B is C	(2) D is not-C
A is B	A is D
∴ A is C	∴ A is not-C

If 'A is C' is false, then 'B is C' or 'A is B' or both are false (inclusive disjunction). So if 'A is B' is true' then 'B is C' must be false. "(A is C) is false" is the same as 'A is not-C'. Then B is not-C. Similarly if 'A is not-C' is false (i.e., 'A is C'), thed 'D is not-C' or 'A is D' or both are false. If 'A is D' is true then 'D is not-C' must be false (i.e., 'D is C)'.

Now if 'A is C' false, then 'A is not-C' is true, and both 'D is not-C' and 'A is D' are true. Again, if 'A is not-C' is false, then 'A is C' is true, and both 'B is C' and 'A is B' are true. This shows that two contradictory 'parāmarśas' namely, "A is B which is C" and "A is D which is not-C", *logically* can never be of equal strength. Otherwise we must do away with the laws of contradiction and excluded middle. The Naiyāyikas certainly cannot repeal these laws. It follows hence that 'vyāptis' and 'pakṣadharmatās' of the two counter-syllogisms cannot also be of equal strength. Either 'vyāpti' or 'pakṣadharmatā' or both in one syllogism must be false, and so the conclusion must be false. Then the other conclusion must be true, and both 'vyāpti' and pakṣadharmatā' of that other syllogism also must be true. Hence Gaṅgeśa's statement to the effect that, in 'satpratipakṣa' the two contradictory 'parāmnrśas' of *equal strength*, following from the *equal strength* of the two 'vyāptis' and the two 'pakṣadharmatās' block the decision, cannot be a serious logical statement. Raghunātha is astute enough to sense this predicament when he introduces the condition of 'agṛhitāprāmāṇyakatva'. We remember that by this condition Raghunātha means that the equality of strength is derived from the incapacity of any disputant or the adjudicator to prove the truth or falsity of either of the counter-positions, despite the fact that one must

be false and the other true. Thus equality of strength is reduced to equality of weakness. But Gaṅgeśa himself has repeatedly remarked that it is not the fault of an argument if the disputant fails to see the truth. It is the fault of the disputant (pramātuḥ ayam aparādhaḥ). So we have observed before, the acceptance of 'satpratipakṣa' as a separate fallacy proceeds from the confusion between the logical and the psychological approaches.

The fallacy of 'satpratipakṣa' is called 'viruddhāvyabhicarin' by Diṅnāga and Dharmnkīrti. Literally it should mean a 'probans not violating the contradictory'. This very term suggests the absurdity of accepting 'satpratipakṣa' as a separate 'hetvābhāsa', since if the contradictory is not violated the counter-probans becomes correct and the original probans incorrect ; and if violated it becomes false and the original probans correct. Arcaṭa in Hetubindutīkā explains the term at length.

["hetoḥ yad ātmīyaṃ lakṣaṇaṃ tadyuktayoḥ hetvoḥ ekatra dharmiṇi virodheṇa parasparaviruddhasādhyasādhakatvena upanipāte sati viruddhāvyabhicārī iti"
—Gkw. ed. pp. 215-216].

One of the contradictory conclusions must be false. Then if the major premise (vyāpti) is false it is a case of 'savyabhicāra', and if the minor is false it is a case of 'asiddha', and if both are false it is a case of both. Dharmnkīrti remnrks :—If the correctness of a probans could be created by the cleverness of a logician, no probans could have proved or disproved anything. Hence if a probans is truly related to a probandum how can it be turned otherwise by a disputant ? One cannot turn upside down the truth that corresponds to the nature of things. Contradictory predications in relation to the same subject would make the subject itself self-contradictory :—

["puruṣapratibhākṛtaṃ yadi sādhanatvaṃ syāt tadā na kiñcit sādhanam asādhanaṃ vā, sa ca hetuḥ yadi svabhāvataḥ tadharmabhāvī katham anyathā

kriyeta ? vastusvabhāvānyathābhāvasya abhāvāt ubhayośca ekatra bhāve viruddhobhayasvabhāva ekaḥ syāt"—Hetubinduprakaraṇa p. 71, Append. to Hetubindutīkā].

Gaṅgeśa's defence against Dharmakīrtī reveals a further weakness. If there is contradiction, one of the contradictoris must be false, and there is nothing to block the correct alternative inference. Again, if there is no contradiction there is nothing to block either of the inference. Against this dilema presented by Dharmakīrti Gaṅgeśa remarks :—The knowledge that one of the 'vyāptis' is subject to violation dawns upon the mind only after the realisation that the conclusion is blocked. Hence the knowledge of violation depends upon the realisation of the blocking of inference. Thus the knowledge of blocking, being the 'upajīvya' or ground of the knowledge of violation, should be counted as forming a separate fallacy :—

["pratiruddhatvajñānānantaraṃ vyāptyādibhaṅgajñānam iti upajīvyatvena vyabhicāravad asyāpi doṣatvāt"
A.C.G. pp. 1767-1798].

But this argument of Gaṅgeśa is unconvincing. If the blocking of inference necessarily leads to the realisation of the violation of 'vyāpti' or 'pakṣadharmatā' in either of the counter-syllogisms, it only shows the truth that two contradictories cannot be of equal strength and that the conclusion must be drawn one way or the other. In short, the very admission, that the knowledge of violation of 'vyāpti' etc., follows from the sense of stalemate, is an indirect admission to the effect that the very blocking itself leads to the lifting of the blockade. So the fallacy is finally established as one of 'savyabhicāra' or 'asiddha' (or both), and the temporary blockade does not by itself constitute a logical fallacy. Moreover, an able adjudicator is not expected to be such a dullard as not to notice the violation of 'vyāpti' or 'pakṣadharmatā' before a blockade draws the curtain on the debate. The moment the two contradictories are placed for judgment he is expected to realise that equal

strength is logically impossible. The incapacity of the disputants to realise this cannot alter the truth. So it is difficult to find an invulnerable defence against Dharmakīrti's contention.

It is significant that the Vaiśeṣikas too do not recognise 'satpratipakṣa' as a separate fallacy. Praśastapāda, on the authority of Kāśyapa, accepts a three-fold classification of 'hetvābhāsas' :—

"viruddhāsiddhasandigdhaṃ aliṅgaṃ kāśyapo'bravīt"
—V.D., V.S.U. ed. p. 480

Śrīdhara in his Nyāyakandalī on Praśastapādabhāṣya has to fall upon the authority of Gautama for recognising 'satpratipakṣa' as an independent 'hetvābhāsa'. Vallabhāchārya, the author of Nyāyalīlāvatī, the famous treatise on the Vaiśeṣika system, clearly dismisses both 'bādha' and 'satpratipakṣa'. He remarks :—

["badhapratirodhāvapi sta iti cenna, ubhayoḥ vyāptigrahapakṣadharmatā'-pahāreṇa eva anumānadūṣakatvāt"—Chw. ed p. 607].

Śaṃkaramiśra explains in his commentary :—"satpratipakṣe tu vyāptisandehād vyāpyatvāsiddḥiḥ ityarthaḥ"

When the contradictories seem to block each other both the 'vyāptis' become subject to doubt. So if even an inference is blocked the fallacy rests in doubtful 'vyāpti' and not in the blockade itself. Śaṃkaramiśra further explains :—

["ubhayatra vyāptisandehopapādakatayā tādrūpyopacāraḥ, alam anena pratibandhena iti"]

Since the stalemate in conclusions raises doubt about both the 'vyāptis', the fault is fathered upon the stalemate itself. But the real logical fault rests in the doubtful 'vyāptis'. Hence the antinomical blockade itself should not be counted as a separate logical fault.

Chapter V

ASIDDHI

(Violation of the Minor Premise)

Section I

GENERAL OBSERVATION

An 'asiddha' probans is termed 'sādhyasama' in the Nyāya-sūtras :—

"sādhyāviśiṣṭaśca sādhyatvāt sādhyasamaḥ" Ns. 1/2/8.

It seems that the Nyāyasūtra directly pinpoints the fallacy where the minor premise is questioned or entertained as false. The minor premise shows the relation between the minor term and the middle term. If this relation is questioned the predication of the middle term to the minor term remains to be proved. That means that the middle term itself remains to be established in relation to the minor term just as the major term is to be established in relation to the same. So the middle term becomes 'sādhyāviśiṣṭa' i.e., not-different from the nature of the probandum which has got to be established. Viśvanātha clearly explains in his vṛtti :—

> ["yathā hi sādhyena vahnyādinā aviśiṣṭaḥ, kuta ityāha sādhyatvād iti, sādhanīyatvād ityarthaḥ, yathā hi sādhyaṃ sādhanīyaṃ tathā heturapi iti cet sādhya-sama ityucyate, ata eva asiddha iti vyavahriyate/"]

The 'hetu' is 'asiddha', because it has not yet been established in relation to the 'pakṣa'. If the minor premise is false the onus of proving it true falls on the first disputant. Without this proof his desired conclusion is prevented.

Vātsyāyana's illustration is clear enough :—

> ["dravyaṃ chāyā iti sādhyam, gatimattvād iti hetuḥ, sādhyena aviśiṣṭaḥ sādhanīyatvāt sādhyasamaḥ"/]

'Shadow is a substance, because it has motion'—this is the inference. Here we do not question the 'vyāpti' or major premise,—whatever has motion is a substance'. But we question the minor premise,—'shadow has motion'. In the Nyāya-Vaiśeṣika view shadow (or darkness) is not a substance, but is mere absence of light. When something screens the rays of light the shadow implies the failure of light to reach a particular location in relation to the screening object. With the movement of the screen or of the source of light the shadow only seemingly moves, because the old location is opened to light and a new contiguous location becomes closed to it. So truly speaking, shadow has no motion. Motion belongs to the screen or the light, and this superimposes a seeming motion on the shadow which is nothing but absence of light. Now since motion cannot be predicated of shadow the conclusion, 'shadow is a substance', does not follow.

This illustration of Vātsyāyana practically covers one type of 'asiddha' which is technically called 'svarūpāsiddha'. Uddyotakara calls it 'prajñāpnīyadharmasamāna'. 'Prajñāpanīyadharma' is the probandum, and the probans has the same status with the probandum, for the probans also is not established and so remains to be proved as a predicate predicable of the minor term. Vācaspati calls it 'svayamasiddha', i.e., the 'hetu' itself is unestablished in relation to the 'pakṣa'.

The minor premise may be questioned in another way. Suppose 'A is B' is the minor premise and suppose there is nothing in the world which stands for 'A'. In that case 'B' cannot be predicated of 'A' that exists nowhere. This is called 'āśrayāsiddha', for the 'āśraya' or the locus of the probans, i.e., the 'pakṣa', is unestablished as a fact, event or object. Here the falsity of the predication arises from the very impossibility of the subject as an existent. The probans is unestablished as a probans, because it cannot be related to a non-existent subject. A correct 'hetu' must have 'pakṣadharmatā', i.e. must be truly predicated of the subject. If the subject is non-existent predication is impossible. So the 'hetu' is 'asiddha' due to the

'asiddhi' (unestablishedness) of the 'pakṣa' itself. In 'svarūpāsiddhi' both the 'pakṣa' and the 'hetu' are by themselves established objects of the world, but the relation between the two is unestablished. In āśrayāsiddhi' the 'pakṣa' is unestablished as a real. So the 'hetu', despite its own objective reality, cannot be predicated of the 'pakṣa' and thus forfeits its logical character. The stock example of āśrayāsiddhi' is :—'the sky-lotus is fragrant, because it has lotusness (gaganāravindaṃ surabhi aravindatvāt).

In the concluding portion of 'asiddha' Gaṅgeśa gives the impression that he is not satisfied with the above illustration of 'āśrayāsiddha'. He raises the problem with a pointed question—"nanu āśrayāprasiddhyā katham āśrayāsiddhiḥ udbhāvyā ?" (A.C.G. p. 1861). The question is related to the Nyāya-concept of negation. The apprehension of negation as a real requires that the negatable counter-correlate (pratiyogin) should also be a real object of the world. Hence the negation of a fiction is itself a fiction. This necessity of the objective pre-establishedness of the negatum to make negation possible at all has been firmly stressed by Udayana in Nyāyakusumāñjali (III/2-3, p. 13-15). Udayana states :—"How do you then negate the rabbit-horn ? Not in any way. In this negation the rabbit-horn cannot figure as a negatable counter-correlate. Negation must be a fact-based reality. There is no reality of a negation of which the negatable counter-correlate is itself unreal ... Then what should be done about the proposition — "the rabbit-horn does not exist ?' Take it as :—'there is absence of horn in the rabbit"

Gaṅgeśa poses the problem with this Nyāya position in his view. The sky-lotus appearing as the minor term is a fiction. The valid proposition contradicting the minor premise is supposed to be,—"lotusness does not exist in a sky-lotus". Now if sky-lotus is a fiction, 'the existence in a sky-lotus' is also a fiction. Then the negation of such an existence is too a fiction on account of the fictive character of the negatum. Hence it follows that the proposition,—"lotusness does not

exist in a sky-lotus", is neither valid nor invalid. It is thus a pseudo-proposition having no truth-value. A fiction is beyond the pale of truth-value, so, how does this so-called contradictory proposition determine the falsity of the minor premise.

Gaṅgeśa first suggests that it is not a case of fallacy, but that of the 'nigrahasthāna' (a point of defeat), called 'apārthaka'. The subject, being a fiction, loses its syntactical efficiency in the structure of the so-called minor premise (vyomakamalam iti niścitānanvayatvena apārthakam). Then he goes on to suggest,—"āśraya-viśeṣaṇāsiddhyā ca āśrayāsiddhiḥ asaṃkīrṇā—(A.C.G, p. 1861).

The deeper intention of Gaṅgeśa's observation has been unfolded thus by Mathurānātha in his direct commentary on Tattvacintāmaṇi :—If the sky-lotus is a reality, there is no question of 'āśrayāsiddhi'. Again if it is a fiction, then too the question of logical fallacy does not arise, because a 'hetvābhāsa' must have some truth-value (siddhyasiddhivyāghāta-dilema). Caught in this dilema Gaṅgeśa has relegated this illustration to the realm of 'apārthaka nigrahasthāna'. Gaṅgeśa is correct only when 'sky-lotus' in its totality in counted as the 'pakṣa', for it is then a pure fiction. But when the lotus itself, which is a real, is accepted as the 'pakṣa', and "belonging to the sky" appears as its adjective, then the fallacy of 'āśrayāsiddhi' is definitely there. Then the negation of sky-lotus would mean, :—the adjective, 'belonging to the sky', does not belong to the lotus (kamale gaganīyatvābhāva, i.e., negation of "belonging to the sky" in the lotus). Such an adjective is not factually established in relation to the 'pakṣa' 'lotus'. Thus the fallacy is constituted by the unestablishedness of the adjective in relation to the 'pakṣa', and not of the 'pakṣa' itself. Mathurānātha observes :—

[idaṃ tu asato vyomakamalasya pakṣatātātparyadaśāyām uktam/ yadā tu gaganīyatvena prasiddhakamalameva pakṣaḥ tadā pakṣa-viśeṣaṇābhāvarūpā āśrayāsiddhireva—
—A. C. G. p. 1861]

This is in accordance with Udayana himself :—"tathā ca aprasiddha-viśeṣaṇaḥ pakṣa iti āśrayāsiddhiriti sa eva doṣaḥ"—(Nk III 3 p. 15). Following this tradition established by Udayana the new school gives a logically refined definition of 'āśrayāsiddhi' :—"Pakṣe pakṣatāvacchedakasya abhāvaḥ"—Viśvanātha in Muktāvalī). In the 'pakṣa' 'lotus', supposedly attended by the adjective "pertaining to the sky", there is no limiting property of 'pakṣatā' such as—"(skyeiness-qualifying-lotus)ness" which is a fictive construction. A more clear example of 'āśrayāsiddhi' is :—"the golden mountain has fire, because it has smoke".

Section—II

VYĀPYATVĀSIDDHI

We may question the minor premise still in another way. The minor premise reveals the 'pakṣadharmatā'-characteristic of the 'hetu'. Now by definition a 'hetu' is that which is pervaded by the 'sādhya'. This relation of pervasion is violated if the probans is found existing anywhere without the probandum. In that case the probans loses its fundamental character as a 'hetu'. When such a 'hetu' is predicated of the 'pakṣa' the predication by itself may not be false ; yet the relation of predication between the 'pakṣa' and *a real or correct hetu* is still wanting, since the assumed 'hetu', though standing for a real object, is not a 'hetu' as it shouid logically be. This is called a case of 'vyāpyatvāsiddhi'. Hence Viśvanātha in his vṛtti on Ns. 1/2/8 explains the matter in this way :—

> ["heturiti padaṃ hi atra pūraṇīyam/hetupadaṃ hi gamakahetoḥ vyāptiviśiṣṭapakṣadharmasya vācakam/ vyāptiviśiṣṭapakṣadharma ityeva vā pūraṇīyam/ tathā ca tasya kincidaṃśasādhyatvenaiva sādhyasamatvam"]

—A 'hetu' to be a 'hetu', it is not enough that it is truly

predicated of the 'pakṣa'. A 'hetu' to be worth its name must be a 'gamaka hetu', i.e., its knowledge must lead to the knowledge of the 'sādhya'. So it should be such a predicative property in relation to the 'pakṣa' as is qualified by the relation of 'vyāpti' between itself and the 'sādhya' (vyāptiviśiṣṭapakṣadharmaḥ hetuḥ). If this qualification is absent the character of a correct 'hetu' is lost, and this unestablished character (asiddhavyāpyatva) makes it unestablished as a 'hetu' in relation to the 'pakṣa' also (vyāpyatvāsiddha). In short, the predicate of the minor premise remains to be established as being pervaded by the 'sādhya'. So the probans *as a probans* remains to be established as much as the probandum.

The question at once arises :—If 'vyāpyatva' or pervasibility of the probans is not established, it means the violation of the universal major, and so 'vyāpyatvāsiddha' turns out really to be a case of 'savyabhicāra'. Then what is the point in recognising 'savyabhicāra' and 'vyāpyatvāsiddha' as two separate fallacies ? Hence in order to distinguish between the two, the concept of 'upādhi' (condition) is introduced to emphasise the specific character of 'vyāpyatvāsiddha'. 'Vyāpyatvāsiddha' thus comes to be defined as 'sopādhikaḥ hetuḥ'. 'Vyāpti' is considered to be an unconditional relation (nirupādhika sambandha) between the probans ahd the probandum. 'Upādhi' means a conditioning qualification. Gaṅgeśa and his commentators have a long chapter on the nature of 'upādhi'. To enter into this long discussion would mean for us an impermissible digression. We shall confine ourselves only to that much as is necessary to bring out the distinction between 'vyāpyatvāsiddha' and 'savyabhicāra'.

The most popular example of 'vyāpyatvāsiddhi' is,—'the mountain has smoke, because it has fire'. The implied major premise is :—'Whatever has fire has smoke'. This 'vyāpti' is considered violable, since the assumed probans 'fire' is not pervaded by the assumed probandum 'smoke', for fire is found existing without smoke in a red-hot iron-ball. But this 'vyāpti' may be corrected with a slight modification. Let us state :—

'whatever has fire *contacted by wet fuel* has smoke'. Here the previous 'vyāpti' stands corrected by introducing the modifying condition, 'contact with wet fuel' (ārdrendhanasaṃyoga), as a qualification of the original probans 'fire'. The original 'vyāpti' is defective, because it ignores the condition that should have been attached to the probans. So the original 'vyāpti' is conditional in the sense that a necessary qualifying condition of the probans has been ignored and left out. The moment this condition is introduced into the body of the probans no condition is left out, and the 'vyāpti' becomes unconditionally valid. In this rectified form of 'vyāpti' the probans is not simple 'fire', but 'fire having contact with wet fuel' (ārdrendhanasaṃyuktavahni). A conditional 'hetu' thus comes to be that of which a necessary conditioning qualification is unnoticingly (or deliberately) left out.

An 'upādhi' or condition is technically defined by older logicians as 'sādhanāvyāpakatve sati sādhyāvyāpakaḥ'—(Nk. Ch. III, p. 30 Chow. ed. 1912). A 'sādhya' by definition is assumed as the pervader of 'hetu'. Hence by the law of transitive predication (transitive pervasion) the pervader of 'sādhya' must be the pervader of 'hetu' :—'vyāpakasya vyāpakaḥ vyāpyasyāpi vyāpakaḥ'. According to the law of transitivity or transitive predication, if A is B and B is C, then A is C. The same law in Indian logic is stated as the law of transitive pervasion :—if A is pervaded by B and B is pervaded by C, then A is pervaded by C. Hence that which pervades the 'sādhya' must also pervade the 'hetu' (sādhana). Now if it is seen that a term pervādes the assumed 'sādhya', but does not pervade the assumed 'sādhana', it violates the law of transitive pervasion and goes to prove that our original assumption of the 'vyāpti' between the assumed probans and the assumed probandum must be wrong. In other words the assumed 'sādhya' is not really the 'sādhya' (pervader-probandum), and the assumed 'sādhana' is not really the 'sādhana' (pervaded probans). This is evident in the false syllogism :—'the mountain has smoke, because it has fire'. The condition 'contact with wet fuel' pervades the assumed probandum

'smoke', but not the assumed probans 'fire'. It can be truly stated :—'wherever there is smoke there is contact of wet fuel (with fire)'. But it will not be true to state :—'wherever there is fire there is contact with wet fuel', because in red-hot iron there is fire without any contact with wet fuel.

Now we see that 'ārdrendhanasaṃyoga', which is the 'vyāpaka' of the assumed 'vyāpaka'-probandum 'dhūma', is not the 'vyāpaka' of the assumed 'vyāpya'-probans 'vahni'. Let 'A' stand for the assumed probans 'fire', 'B' for the assumed probandum 'smoke' and C for the condition (upādhi), 'contact with wet fuel'. The law of transitivity demands :—if A is B and B is C, then A is C. But we find that B is C, but A is not-C. Then it must follow by implication that A is not-B. The law of transitivity is violated and so the general proposition, 'A is B', which assumes the probans-probandum relation between 'A' and 'B', must be false. Thus an 'upādhi' or condition, being noticed, leads to the inference that the major premise of the proposed syllogism is false. Hence Viśvanātha remarks :—'vyabhicārasyānumānam upādhestu prayojanam'—(Kārikāvalī, 140). An 'upādhi' implies that the falsity of the 'vyāpti' is inferable. We infer that 'A is B' is false, since B is C and A is not-C. In our concrete case of false syllogism we may apply the inference in this way :—vahniḥ na dhūmavyāpyaḥ, dhūmavyāpakārdrendhanasaṃyogāvyāpyatvāt :—Fire is not pervaded by smoke, because fire is not pervaded by 'contact with wet fuel', which is the pervader of smoke.

Udayana in his Nyāyakusumāñjali, after giving this technical definition of 'upādhi', proceeds to explain the term in accordance with the meaning which is generally accepted in Vedānta philosophy. Udayana explains the term 'upādhi' as a 'yogarūḍha' word, i.e., a word in which the derivative meaning sacrifices a part of its dimension in order to get itself restricted to the conventional meaning. Derivatively the word means an object that stands near. According to the Vedāntic convention it does not mean any object standing near. It means an object which, by standing near, falsely or

seemingly transfers some of its properties to another object. When a red flower is placed beside a white glassy crystal, the crystal also looks red. The red flower appears as transferring its redness to the crystal. Thus the red flower is an 'upādhi' in relation to the crystal. Udayana introduces this analogy to explain the Nyāya-concept of 'upādhi' :—

["taddharmabhūtā vyāptiḥ javākusumaraktateva sphaṭike sādhanābhimate cakāsti iti upādhiḥ asau ucyate"—(Nk. Ch. III Chow. ed. p. 30)].

Smoke is pervaded by contact of wet fuel (with fire). This pervasive character of 'ārdrendhanasaṃyoga' in relation to smoke is falsely transferred to smoke itself in relation to fire. Thus in the false generalisation, 'wherever there is fire there is smoke', on account of the 'upādhi', smoke falsely appears as the pervader of fire.

This seems to be a very cumbrous and far-fetched way of interpretation. It is better to take 'upādhi' as a purely technical term without searching for the derivative meaning or the Veādntic analogy. Now we come to the original question. If 'vyāpyatvāsiddha' points to 'vyabhicāra' what is the need of recognising it as a fallacy separate from 'savyabhicāra' ? Or, why should 'upādhi' by itself should not constitute an independent 'hetvābhāsa' separate from both 'asiddha' and 'savyabhicāra' ? It will be convenient to begin with the second question. An 'upādhi' by itself does not constitute a fault. But it only leads to the inference of the fault of 'vyabhicāra'. The detection of 'upādhi' leads to the detection of the falsity of 'vyāpti'. To vitiate an inference 'upādhi' 'looks unto another's face', the face of 'vyabhicāra'. We remember the general definition of 'hetvābhāsa' :—A 'hetvābhāsa' is that the valid knowlepge of which inhibits or contradicts the inferential conclusion or the immediate cause of the conclusion i.e., 'parāmarśa'. The knowledge of 'vyabhicāra' directly contradicts 'parāmarśa' and indirectly the inference. But 'upādhi' in itself does not stand in contradiction either to 'parāmarśa' or to inference. Let 'C' stand for 'upādhi', 'B' for

the probandum and 'A' for the probans. The knowledge of 'vyabhicāra', i.e., 'A is not-B', may depend on the detection of 'upādhi', i.e., '*B is C*' *and* '*A is not-C*'. But this detection of 'upādhi' is itself not the contradiction of 'A is B'. The contradiction, i.e., 'A is not-B', is only deduced from 'upādhi' noticing the violation of the law of transitivity. This argument has been summarised by Gaṅgeśa in the following observation :—

> ["na caivam upajīvyatvena upādhiḥ hetvābhāsāntaram, upajīvyatve'pi svataḥ adūṣakatvena tadartham paramukhavīkṣakatvāt, na hi sādhyavyāpakāvyāpyatvam anumitivirodhi, kintu vyabhicāronnayanena"
> —A.C.G. pp. 1866-1867].

According to some an 'upādhi' indirectly vitiates an inference by raising the possibility of a 'satpratipakṣa hetvābhāsa'. Viśvanātha remarks :—"kecit tu satpratipakṣotthāpanam upādhiphalam—(Muktāvalī on Kārikāvalī, 140). Suppose somebody wants to infer that red-hot iron also has smoke. He places the syllogism :—

Whatever has fire has smoke, as for instance, the cookshed :
Red-hot iron has fire ;
∴ Red-hot iron has smoke.

The opponent may at once place a counter-syllogism :—
Wherever there is no contact of wet fuel (with fire) there is no smoke, e.g., the lake ;
Red-hot iron has no contact of wet fuel (with fire)
∴ Red-hot iron has no smoke.

Thus red-hot iron, which is supposed to furnish the instance of 'vyabhicāra', may itself be posed as the minor term in relation to which the presence of smoke is inferred on the strength of one's faith in the generalisation, 'whatever has fire has smoke'. But on the detection of 'upādhi' the opponent fixes his faith in the following generalisation—'Wherever there is smoke there is contact of wet fuel (with fire)'. By the law of transposition he has also equal faith in the trans-

positive negative generalisation :—'wherever there is no contact of wet fuel (with fire) there is no smoke', and on the strength of this he proceeds to the conclusion that red-hot iron has no smoke. Thus when, that which is supposed to constitute an instance of 'vyabhicāra' (red-hot iron) is itself proposed as the 'pakṣa' by the first debater and fire's contact with wet fuel is taken as a pervasive condition for smoke by the opponent, it is difficult to arrive at a decision. This shows that 'upādhi' in itself does not constitute a fallacy, but furnishes the ground for inferring the fallacy of 'vyabhicāra' or 'satpratipakṣa'.

Now let us come to the first question as to the necessity of distinction betweeh 'savyabhicāra' and 'vyāpyatvāsiddha'. 'Savyabhicāra' cannot be brought within the fold of 'vyāpyatvāsiddha.' The knowledge of 'upādhi' leads to the knowledge of 'vyabhicāra,' but the knowledge of 'vyabhicāra' does not *necessarily* depend on the knowledge of 'upādhi'. In the case of the false generalisation, 'whatever has fire has smoke', to know the 'vyabhicāra' I need not go upto the knowledge of 'ārdrendhanasaṃyoga.' It is enough for me if I can detect one instance, i.e., red-hot iron, in which fire exists without smoke. Thus in the syllogism :—'It is a pitcher, because it is knowable', I can easily detect countless instances of 'vyabhicāra' in the 'vyāpti,'—'whatever is knowable is a pitcher', without waiting for the detection of any 'upādhi'. For this very reason we must admit a distinction between 'vyabhicāra' and 'vyāpyatvāsiddhi'. We call a 'hetu' 'vyāpyatvāsiddha' when it is predicated of a minor term with its essential characteristic of pervasibility by the probandum (sādhyavyāpyatva) being subjected to violation *by knowledge or suspicion of an 'upādhi'*. We reserve the term 'vyabhicāra' for those cases where the knowledge of violation of 'vyāpti' does not depend on the knowledge of 'upādhi'. But anyway the reason is not clear as to why 'vyāpyatvāsiddha' should not be brought within the fold of 'savyabhicāra'. The difference between 'savyabhicāra' and 'vyāpyatvāsiddha' finally boils down to to the difference between a direct 'vyabhicāra and an inferred 'vyabhicāra'. So it is quite natural to doubt if 'vyāpyatvā-

siddha' in the sense of 'sopādhikahetu' deserves to be placed outside the class of 'savyabhicāra'.

It is significant that as regards the concept of 'vyāpyatvāsiddha' the newer logicians under the leadership of Raghunātha do not put much emphasis on 'sopādhikahetu', but on such types as 'sādhyāprasiddhi', 'sādhanāprasiddhi' etc. An instance of 'sādhyāprasiddhi' is provided by the following :—'the mountain has golden fire, because it has smoke'. A golden fire is non-existent ('aprasiddha', not established as a real). So there is no possibility of a 'hetu' being pervaded by a non-existent 'sādhya'.

We find an instance of 'sādhanāprasiddhi' in the syllogism:—'the mountain has fire, because it has golden smoke'. The 'hetu', 'golden smoke', is unreal and so there is no sense in saying that an unreal 'hetu' is pervaded by a 'sādhya'. Both are instances of 'vyāpyatvāsiddhi' in the sense that it is senseless to hold that a 'hetu' is pervaded by a non-existent 'sādhya' or that a non-existent 'hetu' is pervaded by a 'sādhya'. The term 'vyabhicāra' is then reserved for a falsely assumed universal relation between two factually established terms.

A controversial example of 'vyāpyatvāsiddhi' is :—'The mountain has fire, because it has blue smoke' (parvato'yaṃ vahnimān nīladhūmāt). The syllogism is considered defective on account of the irrelevant adjective (vyarthaviśeṣaṇa), 'blueness', being attached to the 'hetu'. We have seen before that, a heavy property (gurudharma) should not be accepted as a limiting property (avacchedakadharma), when a lighter property (laghudharma) is sufficient for the purpose. Though smoke is blue its character of being a 'hetu' as being pervaded by fire is *smokeness*, but not '(blue-smoke)-ness'. Smoke is pervaded by fire, not because it is blue smoke, but because it is simply smoke. Thus *(blue-smoke)-ness* should not be considered as the limiting property of 'hetutā' (hetutāvacchedakadharma), when the lighter property 'smoke-ness' suffices for the limitation. 'Nīladhūmatva' turns out to be a heavier property involving the irrelevant adjective (blue-ness) in comprrison with the lighter property

'dhūmatva', which can effectively limit 'hetutā' to 'dhūma' alone. The syllogism is an instance of 'vyāpyatvāsiddhi', for what is sufficient for 'vyāpyatva' is smokeness, not the more-than-sufficient '(blue-smoke)-ness'.

Raghunātha and his followers do not agree that this burden of a redundant adjective constitutes a case of 'vyāpyatvāsiddhi'. The point to be considered is whether blue smoke is pervaded by fire or not. There is nothing logically and factually wrong in the generalisation, 'wherever there is blue smoke there is fire', just as there is nothing wrong in the proposition, 'All Asiatic men are mortal'. If it is considered wrong, then 'all men are mortal' is also a wrong proposition. We should have said only,—'all animals are mortal'. Men are a section of animals. If we predicate mortality of human animals we are simply showing indulgence to a redundant adjective. But logicians do not agree. Then why should we raise objection against 'all Asiatic men are mortal' or 'all blue smokes have fire'.

Raghunātha poses the problem with this introduction :—

["Yat tu hetutāvacchedakasya vyāpyatānavacchedakatvamapi vyāpyatvāsiddhi......" etc.

(A. C. G. p. 1855)]

Raghunātha understands the elders' view in this way :— 'Nīladhūmatva' may be 'hetutāvacchedaka', but not 'vyāpyatāvacchedaka'. Blue smoke as a probans may *appear* all right, because the relation of pervasion is there. So '(blue-smoke)-ness' may be the 'hetutāvacchedaka' dharma. Yet unqualified smokeness is enough for establishing the probandum. The irrelevant adjective 'blue' does not add any purposeful qualification so far as the relation between smoke and fire is concerned. Blueness is not at all a determining factor for smoke being pervasible by fire. So '(blue-smoke)-ness' should not be considered as the 'vyāpyatāvacchedakadharma'. But Raghunātha himself does not seem to be in favour of any distinction between 'hetutāvacchedaka' and 'vyāpyatāvacchedaka'.

A 'hetu' by definition must be 'vyāpya'. An object or term by itself is neither a 'hetu' nor a '*not*-hetu'. It becomes a 'hetu' when the logical character of 'hetutā' is conceptually imposed on it. A fundamental logical character of 'hetu' is 'vyāpyatva' or pervasibility. So the distinction between 'hetutāvacchedaka' and 'vyāpyatāvacchedaka' is uncalled for. That this is the opinion of Raghunātha may be deduced from the following remark of Viśvanātha in his Muktāvali :—

> ["nīladhūmād ityādau gurutayā nīladhūmatvasya *hetutānavacchedakatvamapi* vyāpyatvāsiddhiḥ ityapi vadanti—under Kārikā :—71]

Viśvanātha explains that 'nīladhūmatva' being a heavy property should not be accepted as 'hetutāvacchedaka'. In this interpretation of the elders' view Viśvanātha takes hetutāvacchedaka' to be the same as 'vyāpyatāvacchedaka', We need not here concern ourselves further with the problem whether there should be any distinction between 'hetutāvacchedaka' and 'vyāpyatāvacchedaka' Anyway the elders detect 'vyāpyatvāsiddhi' in the argument :—'parvato vahnimān nīladhūmāt'.

Raghunātha counters the view that a heavy property should not be accepted as an 'avacchedakadharma'. The essential logical requirement of an 'avacchedakadharma' is '*anatiriktavṛttitva*', irrespective of the consideration whether it is a heavier or lighter property. A limiting property should not over-extend beyond the locus of the limitable property. 'Nīladhūma' is perfectly pervaded by fire. 'Nīladhūmatva' or '(blue-smoke)-ness' does not exist beyond 'nīladhūma' which is here the locus of the limitable property, 'vyāpyatā' or pervasibility. So as a limiting property 'nīladhūmatva' is 'anatiriktavṛtti'. Hence 'nīladhūmatva' as the 'vyāpyatāvacchedakadharma' does not deserve any logical objection. If somebody still insists that an 'avacchedakadharma' must be a lighter property he will not be able to account for the validity of the following inference :— 'it is an animal, because it has limbs like dewlap etc. (ayaṃ paśuḥ sāsnādimataḥ'. Here the 'hetu' is 'sāsnādimat' (having

limbs like dewlap etc.) and the 'hetutāvacchedaka' or 'vyāpyatāvacchedaka dharma' is 'sāsnādi' (dewlap etc.). It is a heavier property in comparison with 'gotva' or cow-ness. The elders should have said that the proper syllogism should be 'ayaṃ paśuḥ goḥ' (It is an animal, because it is a cow). But the elders do not question the argument—'ayaṃ pasuḥ sāsnādimataḥ', though 'gotva' is definitely a lighter property than 'sāsnādi'. Thus they are not consistent in their view that a heavy property should not be accepted as an 'avacchedakadharma'. So Raghunātha does not take the argument 'parvato vahnimān nīladhūmāt' as an instance of 'vyāpyatvāsiddhi'.

Some take it to be an instance of the 'nigrahasthāna', called 'adhika'. A 'nigrahasthāna' is not a fallacy of the middle term, but is a point of discomifiture in debate due to certain other weaknesses. Here the weakness lies in taking more than is necessary into the body of the 'hetu'. In this sense taking more than necessary amounts to talking irrelevant. The Nyāyasūtra runs :—

"hetūdāharaṇādhikam adhikam"—(Ns. 5/2/13)

Raghunātha, however, takes it to be a separate 'nigrahasthāna', not expressly mentioned by Gautama, but sought to be collected by the force of the particle 'ca' in the last Nyāyasūtra—'hetvābhāsāśca yathoktāḥ'. Jagadīśa in his commentary on Dīdhiti at the end of 'asiddhi' remarks :—

["hetvadhikam iti sūtradṛṣṭyā hetudvayādiprayogasthale eva adhikasya nigrahasthānatvopagamāt"

—A. C. J. p. 1194]

It is evident from Jagadīśa's remark that Raghunātha likes to reserve "adhika-nigrahasthāna' for the instances where one 'hetu' etc. being sufficient, more than one is proposed.

CHAPTER—VI

BĀDHA

(Absolute direct contradiction of the conclusion)

Section—I

THE NYĀYA VIEW IN GENERAL

'Bādhita hetvābhāsa' is otherwise called 'atītakāla' or 'kālātīta' in the Nyāyasūtras. In the enumerative sūtra (1/2/4) it has been called 'atītakāla' while in the special definition it has been termed 'kālātīta'. The definition is—"kālātyayāpadiṣṭaḥ kālātītaḥ"—(1/2/9). Vācaspati remarks :—"kālātīta iti 'lakṣyanirdeśaḥ' (definiendum), kālātyayāpadiṣṭa iti lakṣaṇam (definiens)".

It is generally accepted that the probans is posed to establish the probandum at the time which is marked by the existence of doubt about the existence of the probandum. If there is no such doubt the poser of the probans is useless, since there is nothing to be established. The sense of this uselessness may emerge in two opposite contexts,—(1) when the probandum is already accepted as established (siddhasādhana) and (2) when it is universally accepted that the probandum cannot be predicated of the minor term (bādha). Suppose somebody argues :—'fire is not-hot, because it is created (vahniḥ anuṣṇaḥ kṛtakatvāt). Here the employment of the probans is fruitless, because the proposition to be established (fire is not-hot) is immediately contradicted by the universally accepted valid knowledge that fire is hot. There is no scope of doubt whether '(not-hot) ness' can or cannot be predicated of fire. The probans becomes fruitless, because its employment has crossed the time-limit of doubt which determines the fruitfulness of an inference. This literal meaning of the term 'kālātyayāpadiṣṭa' or 'kālātīta' has

been quite clearly brought out by Vācaspati in the following words :—

["hetorapadeśasya hi sādhyasandehaviśiṣṭaḥ kālaḥ/ yathāhuḥ : nānupalabdhe na nirṇīte nyāyaḥ pravartate, api tu sandigdhe"—Tpt, Mithilā ed. p. 666]

—An argument does not proceed in respect of a matter that is completely unknown or definitely known, but only in respect of that which is held under doubt. When the contradictory of the proposition to be established has already been accepted as an established fact, the placing of probans becomes fruitless, because the time and scope of doubt are already past. The probans cannot lead to the desired conclusion.

It is clear that this definition of 'bādhita' given in the Nyāyasūtras and accepted by the older school oversteps into the fault of 'sidhasādhanatā'. The term 'kālātyayāpadiṣṭa', taken literally, over-extends to 'siddhasādhana', because in this case also the proposition being alreadv established, the proper time for employing the probans has passed.

This consideration has prompted the new school to look for a new definition, and the name of the fallacy too has been suitably changed from 'kālātyayāpadiṣṭa' to 'bādhita' (directly contradicted or inhibited). 'Bādha' may be defined as the direct inhibition of such an inferential conclusion as of which the contradictory is undoubtedly accepted as pre-established in knowledge. This pre-establishedness of the contradictory of the establishable proposition means that the capacity of the probans to establish the intended probandum in relation to the minor term is also contradicted or inhibited. So such an incapacitated probans is itself called 'bādhita'. Raghunātha defines 'bādha' as :—

["pakṣe sādhyavattājñānasya sākṣād virodhi pratyekameva bādhaḥ" —A.C.G. p. 1885]

The meaning of this definition has already been explained above. That this contradictory knowledge must be definitive knowledge has been emphatically stated by Raghunātha :—

"tanniścayaśca virodhiniścayatvena......virodhī'—The contradictory character of knowledge is grounded In its definitiveness —(Ibid. p. 1885).

Due to the peculiar syntax of Sanskrit the central concept of this definition may take different forms such as :—

[sādhyābhāvavān sādhyavadanyaḥ vā pakṣaḥ, pakṣāvṛtti sādhyam, pakṣe sādhyābhāvaḥ, pakṣaniṣṭhasādhyābhāvavattvam, and so on—Ibid]

We get here the significance of the expression 'pratyekameva' in Raghunātha's definition quoted before. These different forms of direct contradiction to inferential conclusion rest upon different concepts of substantive-adjective relation in the syntactical structure of a propositional statement. The common form is 'sādhyābhāvavān pakṣaḥ' in which the 'pakṣa' appears as the subject and the negation of the 'sādhya' as the predicate. This corresponds to the propositional form, 'A is not-C'. The same thing may be understood in the sense of exclusion. The 'pakṣa' is excluded from the class of those particulars that have the 'sādhya', or, the 'pakṣa' is different from that which has the 'sādhya'. In this sense 'A is not-C' is equivalent to 'A is not-(that has C)'. Here 'not' means different' or 'excluded from'. In both these forms the minor term figures as the subject and the negation of the major term as the predicate. Again the same proposition 'A is not-C' may be turned into its equivalent 'C is absent-in-A' (pakṣāvṛtti sādhyam) in which the major term is turned into the substantive subject, and 'A' as the locus of the absence of 'C' is turned into the predicative adjective. (C is that which is absent in A) is equivalent to (C is that which cannot to predicated of A).

Again this may be understood as the "negation of 'sādhya'" existing in 'pakṣa' (pakṣe sādhyābhāvaḥ). In this form of understanding, which corresponds to the peculiar twist of syntax in Sanskrit, the negation of 'sādhya' becomes the substantive and 'pakṣa' the adjective. It is difficult to turn it directly into a predicative form of proposition. We cannot say :—'pakṣa' is predicated of 'sādhyābhāva', i.e., A is predicated of not-C,

because 'A is not-C' cannot be reduced to 'not-C is A'. In Indian logic the concept of locativity is different from the concept of predication, and so these two concepts require two difierent structural forms of statement. When we say 'pakṣe sādhyābhāvaḥ' we mean :—"*sādhyābhāva* has for its locus the pakṣa" i.e., 'not-C' has 'A' for its locus. It is quite different from :—'A is predicated of not-C', which is definitely wrong in this context.

The same thing may be said in respect of the form 'pakṣa-niṣṭha-sādhyābhāvavattva', which only expresses 'pakṣe sādhyā-bhāvaḥ' in a different manner. 'Pakṣe sādhyābhāvaḥ' is *equivalent* to 'pakṣaniṣṭha sādhyābhāvavattva'. But the two are are not strictly the same. When we say, "the negation of 'sādhya' exists in 'pakṣa' ", we mean by implication that "the character of possessing the negation of 'sādhya' belongs to the 'pakṣa' ". As such the locative concept involved in 'pakṣe sādhyābhāvaḥ' may be reduced to the predicative concept 'pakṣaḥ sādhyābhāvavān' in which the character of having the negation of 'sādhya' is predicated of the 'pakṣa'.

Grammatically, in the expression 'pakṣaniṣṭha-sādhyābhāva-vattva' 'sādhyābhāvavattva' appears as the substantive. But we think, the logical reduction of this grammatical form is not :—"the character of having 'sādhyābhāva' belongs to 'pakṣa' ", but is,—'pakṣaḥ sādhyābhāvavān. Why we do suggest this will be clear from the following consideration. When we say 'A is not-C' the substantive-subject character of 'A' and the predicative adjectival character of 'not-C' are clear enough. But when we say, 'not-C is predicated of A', 'not-C' appears as the grammatical subject. This latter form of expression is not a *proposition* by itself. It is an *interpretational statement* of the proposition 'A is not-C'.

Hence we cannot say that 'A is not-C' is logically equivalent to 'not-C is predicated of A'. A predicative proposition is itself not the *statement of predication*. In a hierarchy of statements if the predicative preposition stands on the primary plane, the statement of predication must belong to the higher

or secondary plane. To borrow a significant expression from Wittgenstein, a proposition only *shows* itself, "no proposition can say anything about itself" (Tractatus 3.332). On this consideration, we think, the expression 'pakṣaniṣṭha-sādhyābhāvavattva' does not bring out 'sādhyābhāvavattva' as tbe logical subject-substantive (viśeṣya) of a propositional statement. To get the logical form we should bring it down to the primary plane of 'pakṣaḥ sādhyābhāvavān'. Even then it is not a proposition, but only a propositional form. To get the proposition proper we are to translate it into concrete values such as 'A is not-C' or 'hradaḥ vahnyabhāvavān'.

Anyway, the different formal structures of 'bādha', as shown by Raghunātha, may be reduced to two basic forms :—(1) the locative form, 'pakṣe sādhyābhāvaḥ', in which the negation of 'sādhya' appears as the substantive, and (2) the propositional form, 'pakṣaḥ sādhyābhāvavān', clearly exhibiting the subject-predicate relational structure. The other forms shown by Raghunātha are only interpretational statements of these two basic forms.

Even then Raghunātha himself seems to accept the locative structure as the more basic form of the 'bādha'-statement. So we find that Visvanātha in his Muktāvalī defines 'bādha' as "badhastu pakṣe sādhyābhāvādiḥ" (under Kārikā 71). When 'A is not-C' directly contradicts 'A is C' we require the constancy of the subject and the variation of the predicates. Thus direct contradiction between two propositions is basically derived from the primary contradiction between the contradictory predicates 'C' and 'not-C'. This specific concept of contradiction is expressed by the dictum :—"samāne viśeṣye tatprakārakaṃ bodhaṃ prati tadabhāvaprakārakaḥ bodhaḥ virodhitayā bādhakaḥ". Hence to emphasise the negative-terminal character of the contradictory predicate 'not-C', Raghunātha has accepted the locative form, 'pakṣe sādhyābhāvaḥ' in preference to the proper subject-predicate propositional form 'pakṣaḥ sādhyābhāvavān'. It is also significant that Viśvanātha in his original Kārikā defines 'bādha' in the propositional form taking 'pakṣa'

as the substantive :—"sādhyaśūnyo yatra pakṣastvasau bādha udāhṛtaḥ"—(karikā 78). But in Muktāvalī, in which logical rigidity is more pronounced, he prefers the locative form, "bādhastu pakṣe sādhyābhāvādiḥ".

Section—II

GANGEŚA'S OWN VIEW ON BĀDHA

Gaṅgeśa raises an interesting problem regarding the content of contradictory knowledge in the case of 'bādha,'—whether the contradiction is constituted simply by the contradictory knowledge or by the knowledge of the *validity* of the contradictory knowledge. We roughly say that the knowledge, 'the lake has fire', is contradicted by the knowledge, 'the lake has no fire'. But we admit that the knowledge of the contradictory proposition is perceptually guaranteed. That means that the capacity to contradict depends on the accepted sense of certitude to the effect that the contradictory knowledge is valid. The sense of cognitive certitude is derived from the certitude about the validity of the contradictory knowledge :—"pakṣe sādhyābhāvaniścayaḥ sādhyābhāvajñāna*pramātva*niścayāt"
—(A. C. G. p. 1882)

The reason behind proceeding up to the point of knowing the validity of the contradictory proposition is explained by Gaṅgeśa in the following way :—

According to the Nyāya view the sense of certainty about an object cannot be entertained in the pure knowledge of the object itself. Had it been so there would have been no necessity of the inferential knowledge of validity which ensures that the previous knowledge of the object is valid,—"jñānamātrād arthaniścaye prāmāṇyagrahavaiyarthyam"—(Ibid.). This follows from the theory of 'parataḥ prāmāṇya'. The two propositions 'A is C' and 'A is not-C' are contradictories. The simple contradiction does not tell us which one is true and which false. But the concept of 'hetvābhāsa' except in the case of 'satpratipakṣa',

requires the affirmation of validity to be fixed upon one of the contradictories. Otherwise mutual confrontation between two propositions would result in a deadlock as we find in 'satpratipakṣa'. Knowledge of pure contradiction on the purely logical plane means :—of the two contradictories *each* contradicts *the other*. But to fix a 'hetvābhāsa' we require something more than purely logical contradiction. We require to know for certain that '*this*' *one* '*supersedes*' '*that*' *one*. Hence in 'hetvābhāsa' the sense of contradiction must be accentuated by the sense of a definite particularised supersession. Supersession means that of the two contradictories one is stronger and the other weaker. The strength of the stronger lies in its validity and the weakness of the weaker lies in its falsity. The knowledge that the lake has no fire undoubtedly stands in contradiction to the knowledge that the lake has fire. Yet the former cannot supersede the latter until and unless it is assured that the former is valid. In the context of 'hetvābhāsa' the term 'certain knowledge should be reserved for such knowledge as involves the sense of certainty about an object as it is in the world of facts—"na hi bhramatvena jñānād arthaniścayaḥ"—(Gaṅgeśa, Ibid). This consideration covers all 'hetvābhāsas' except 'satpratipakṣa'.

One may argue that for the sake of supersession it is enough that the superseding knowledge should be valid. It is not further necessary that the validity itself should figure as the object of knowledge. In other words it is enough to say that the valid proposition 'the lake has no fire' supersedes the false proposition 'the lake has fire'. It is not necessary to go as far as :— The proposition, '(A is not-C) is valid', supersedes the proposition 'A is C'. In the latter concept of supersession the superseding proposition is a second-tier proposition or a statement of validity of a statement. But the contradiction obtains between the two propositions, both belonging to the first tier on the same plane.

Against this contention Gaṅgeśa argues :—

In that case when somebody falsely believes that the proposition 'the lake has no fire' is false, he should not have the false

inference that the lake has fire. 'A is not-C' is a true proposition. But somebody entertains the proposition, '(A is not-C) is false'. *In fact* he then infers that 'A is C'. This should not have been the case if the contender's view were correct. In this view it is enough for supersession to know that there is a proposition such that 'A is not-C'. It is not necessary to know that '*A is not-C' is valid.* The *knowledge* of its *validity* or *falsity* should be then equally indifferent to the inference 'A is C'. Hence despite the false knowledge that '*A is not-C' is false*, the false inference 'A is C' should not have occurred, because the knowledge of the proposition 'A is not-C' is *factually* true.

Again suppose 'A is not-C' is a false proposition. But somebody falsely believes that the proposition is true. Then by entertaining the second-tier false proposition '(A is not-C) is valid', the inference 'A is C' is inhibited. If the knowledge of validity had nothing to do with the supersession, this inhibition would not have been possible. Thus even when there is knowledge of the true propositional form that the 'sādhya' does not exist in the 'pakṣa', the inferential form that 'the 'sādhya' exists in the 'pakṣa', may occur to some one who *falsely* accepts the knowledge of 'sādhyābhāvavān pakṣa' as *false*. And conversely, when the knowledge of 'sādhyābhāva' is really *false*, the inference about the same 'sādhya' may be inhibited in respect of a person who *falsely* accepts the knowledge of 'sādhyābhāva' as *true*. This shows that for the purpose of superseding a false inferential knowledge, the mere knowledge of the contradictory proposition is not sufficient. What we require more is the knowledge that *the knowledge of the contradictory proposition is valid.* Hence the superseded and the superseding contradictories should belong to two different planes of the hierarchy of propositions. If 'A is C' is a false proposition, the superseding proposition should not be simply the contradictory 'A is not-C' belonging to the same logico-epistemic plane, but it should be the second-plane proposition—{(A is not-C) is valid}. These

arguments have been pointedly placed by Gaṅgeśa in the following remark :—

["atha pakṣe sādhyābhāvapramaiva sādhyābhāvahetuviṣayā vyabhicārajñānatvena doṣaḥ, na tu tasyāḥ pramātvajñānamapi, iti cet, tarhi pramāyā apramātvajñāne bhrāntānumitiḥ na syāt, na syāt ca pakṣe sādhyābhāvajñānapramātvabhramād anumitipratibandhaḥ"—Ibid pp. 1882—1883]

Section—III

RAGHUNĀTHA'S OWN VIEW ON BĀDHA

Raghunātha, however, does not accept this position of Gaṅgeśa. He remarks :—

["sādhyābhāvavatpakṣādijñānapramātvaṃ tu na bādhaḥ/ tajjñānasya pakṣādau sādhyābhāvādeḥ anavagāhitve virodhiviṣayatvābhāvāt, avagāhitve tu tadviṣayatvena eva pratibandhakatvāt pramātvaniścayasya anyatra pratibandhakatvākalpanācca'—Ibid. p. 1885]

What Raghunātha means is this :—

Supersession of the knowledge of the 'sādhya' in the 'pakṣa' must be based on the logical contradiction between the knowledge of the 'sādhya' and the knowledge of the 'sādhyābhāva' in respect of the same minor term. When Gaṅgeśa says that the superseding contradictory knowledge should *expressly* involve the *validity* of the propositional knowledge itself as an object of knowledge, he clearly crosses the border of logical contradiction on which the supersession is definitely based. The two propositions 'A is C' and 'A is not-C' are logical contradictories. But when we take two such propositions as (1) 'A is C', and (2) "(A is not-C) is true", we cross the normal bounds of contradiction. The knowledge of the first proposition takes for its object the positive relation between the subject 'A' and the predicate 'C'. But the knowledge of the second proposition takes for its object the relation between a completely different subject, namely, *the proposition 'A is*

not-C', and a completely different predicate, namely, 'true'. Thus when both the subject and the predicate vary in the two propositions how can you take them as contradictories? It violates the accepted specific law of contradiction to the effect that, in the case of direct contradiction between two propositions, a predicative term and the negation of this predicative term are respectively predicated of the same *common* subject belonging to the two propositions.

There is no direct logical contradiction between the knowledge that 'A is C' and the knowledge that :—[the knowledge that (*A is not-C*) is true]. When we say that the first knowledge is superseded by the second knowledge we take the concept of supersession from the logical plane to the epistemological plane. This supersession is an epistemic fact, but not a logical necessity. To bring down this epistemic supersession to the logical plane we require a long series of deduction :—[The *super-knowledge* that,—{the knowledge that 'A is not-C' is true}] involves as its object,—{the knowledge that 'A is not-C' is true}, which again involves as its object the super-proposition that,—('A is not-C' is true), which again has for its constituent the primary proposition 'A is not-C'. If you are to finally come down to this logical plane in search of the direct contradiction, was it necessary for you to take the long flight of steps to ascend to the epistemic plane and then again to descend to the logical plane by the same flight of steps ?

The argument of Gaṅgeśa to the effect that,—inhibitory supersession requires an affirmation of superior strength and this superior strength rests upon the knowledge of validity, is effectively countered by Raghunātha in this way :—

The superseding ability of the contradictory proposition may be sufficiently guaranteed by the condition that,—the knowledge of the proposition 'A is not-C' is *not* to be attended by the knowledge of its *falsity*. In other words, the contradictory knowledge should be objectively valid and it should not suffer from an attending false knowledge

such that the contradictory knowledge is false. Raghunātha observes :—

"sarvatra niścayasya hetutve pratibandhakatve ca bhramatvāgrahaḥ prayojakaḥ"—(Ibid. p. 1885).

This has been faithfully echoed by Viśvanātha in Muktāvalī :—"bhrmatvajñānānāskanditabādhādibuddheḥ pratibandhakatā"—(under Kārikā 71). It should be noted that the absence of the knowledge of falsity is not the same as the positive knowledge of validity.

Another objection against running up to the knowledge of validity in order to get the contradiction is the consequent heaviness (gurutva) of the the 'avacchedaka dharma' (limiting property) of 'virodhitā' or contradictoriness. But we have seen before that according to Raghunātha the most essential character of an 'avacchedaka dharma' is 'anatiriktavṛttitva', and not 'laghutva' or lightness. Sometimes a heavier property, if it does not violate the condition of 'anatiriktavṛttitva', may be an 'avacchedakadharma' as in the syllogistic instance, 'ayaṃ paśuḥ sāsnādimataḥ'. Yet when a lighter property is sufficient a heavier property should not be entertained as a limiting property. A heavier property is accepted for limitation only in exceptional cases where it is logically necessary to accept it (the law of sufficiency).

But here in the context of the fundamental concept of contradiction that we are considering, we have seen, following Raghunātha, that it is fruitless to run up to the knowledge of validity. Hence here the avoidable heaviness of a limiting property must be a logical fault. Let us take Gaṅgeśa's position :—contradictoriness is provided by the *certain knowledge* of—[the *validity* of (the knowledge in the structure of which the negation of the probandum is predicated of the minor term)]. In the first-tier knowledge, which figures as the object of the second-tier higher knowledge, the negation of the probandum is predicated of the minor term. Again in the inclusive higher knowledge, the *validity* is predicated of the included primary

knowledge. Thus the total comprehensive higher knowledge is :—"the knowledge that—[the knowledge that (the lake has not-fire) is valid]". If this total complex of the comprehensive knowledge is conceived as the contradictory of the simple knowledge, 'the lake has fire', then the 'pratibandhakatāvacchedaka dharma' of contradictoriness will be—"[{(hradaviśeṣyakasādhyābhāva)-prakārakajñāna}-viśeṣyakapramātvaprakāraka]-niścayatva," i.e., [the character of being such a *certain knowledge* as in which the *validity* is predicated of another *subsumed* knowledge in which the negation of the probandum is predicated of the minor term of the primary proposition]. As a limiting property it is unweildy. This consideration of Raghunātha is pointedly and approvingly presented by Viśvanātha in Muktāvalī—"evaṃ sādhyābhāvajñāne pramātvajñānamapi na pratibandhakam, mānābhāvāt, gauravācca"—(under Kārikā 71.)

Thus the objective validity of the contradictory knowledge accompanied by the objective absence of the knowledge of falsity of the superseding proposition (aprāmāṇyagrahānāskandita-yatharthabādhabuddhi) is enough for the conception of 'bādha' as a 'hetvābhāsa'.

Section—IV

THE BUDDHIST OBJECTION AGAINST BĀDHA AS AN INDEPENDENT HETVĀBHĀSA

The Buddhist objections against 'bādha' as a separate 'hetvābhāsa' have been most forcefully and elaborately presented in Dharmakīrti's Hetubindu and Arcaṭa's commentary thereon. Those objections are restated for critical examination by Jayanta in his Nyāyamañjarī under the 'anumānasūtra' of Gautama. The most fundamental objection against 'bādha' is concentrated in the following statement of Dharmakīrti—"bādhāvinābhāvayoḥ virodhāt"—Hbp. Gkw. ed. p. 68).

This has been quoted and criticised by Jayanta. The meaning of Dharmakīrti's objection may be elaborated as follows :—

'Bādha' is the direct contradiction of an inferential conclusion by the pre-established knowledge that the negation of the probandum can be truly predicated of the minor term. If this contradiction is valid it unfailingly means that (provided the minor premise is not questioned) the major premise intended to show the universal relation between the probans and the probandum must be false, i.e., the major term cannot be truly predicated of the middle term in the superseded syllogism. Hence 'bādha' and 'avinābhāva' (the universal relation between the major and the middle terms in the superseded syllogism) are incompatibles. Let us take the syllogism :—'B is C' and 'A is B', therefore, 'A is C'. Now let us suppose that the proposition 'A is not-C' is validly pre-established in knowledge, and let us not question the minor premise 'A is B'. Then the major premise 'B is C' must be false. Provided the minor premise is unquestioned, 'A is not-C' and 'B is C' must be incompatibles. Hence if 'A is not-C' is true, 'B is C' must be false. The truth of this formal position is quite evident in the concrete application :— 'vahniḥ anuṣṇaḥ kṛtakatvāt' (Fire is not-hot, because it is created). The expanded syllogism runs thus :—

Whatever is created is not-hot.
Fire is created.
Therefore, fire is not-hot.

We do not question the minor premise. The conclusion is validly contradicted by the pre-established valid knowledge that fire is hot. If that is so, the major premise, 'whatever is created is not-hot', must be false. That means that the probandum 'not-hot' cannot be unversally predicated of the probans 'created object'. The impossibility of this universal predication involved in the major premise constitutes the fallacy of 'savyabhicāra', Hence in the case of 'bādha' the real fallacy is 'savyabhicāra', provided the minor premise is not challenged. Thus 'bādhita 'hetu' should not be accepted as a separate 'hetvābhāsa'. In such

a case if the major premise is true the contradictory of the conclusion must be false. If the contradictory is true the original major premise must be false. Thus, accepting the truth of the minor promise, the contradictory of the conclusion and the major premise (i.e. 'A is not-C' and 'B is C') are mutually contradictories. This is meant by Dharmakīrti's remark—'bādhāvinābhāvayoḥ virodhāt'. Dharmakīrti explains his position in this way :—

> ["avinābhāvo hi satyeva sādhyadharme bhāvaḥ hetoḥ, sa hetuḥ tallakṣaṇaḥ dharmiṇi syāt/atra ca sādhyadharmaḥ kathaṃ na bhavet? pratyakṣānumāne hi sādhyadharmaṃ bādhamāne taṃ grīvāyāṃ gṛhītvā dharmiṇaḥ niṣkasayatāh/tasmin ca satyeva hetuḥ bhavan taṃ tatraiva avasthāpayati iti paraṃ vata bhāvānām asvāsthyam" Ibid. pp. 68-69.

We have modified the printed text according to the reading presented by Arcaṭa]

Dharmakīrti's remark is charged with a fine sense of wit and humour. A more powerful perception or inference forcibly 'expels' the assumed probandum from the minor term. Now if the major premise is valid, the probans to be worth its salt must effectively assure the presence of the probandum along with itself, because it cannot logically afford to lose the company of the probandum. On the one hand the probandum is sought to be 'expelled' by a superior force, on the other it is 'pushed in' by the force of the probans. Sandwiched between these two confronting forces the poor probandam is in dire distress. This only shows that in the case of 'bādha' (if the minor premise is unquestionable) the major premise cannot be true. Thus a direct valid contradiction of the inferential conclusion implies the falsity of 'vyāpti', and as such the probans is incapacitated towards establishing the conclusion.

Moreover, the 'pakṣa' or the minor term, by definition, is recognised as the subject in relation to which the predication of the probandum is not known to be contradicted by any 'pramāṇa' :—"abādhitadharmā dharmī ityucyate". If you

already know that the probandum cannot be predicated of the minor term, the latter loses its very character as a minor term and so the fallacy turns out to be one of 'āśrayāsiddhi'.

Again a 'hetu' is not-'hetu', if it is not pervaded by the 'sādhya' and if its incapacity to establish the 'sādhya' is already made evident by a valid contradiction of the conclusion. In such a case the minor premise loses its character of showing the 'pakṣadharmatā' or the relation between the middle term and the minor term. The term that we have assumed to be the middle term is not really the middle term. So its predication to the minor term is not 'pakṣadharmatā' in the proper sense. From this consideration the fallacy turns out to be one of 'svarūpāsiddhi', because a real 'hetu' is not really predicated of the 'pakṣa'.

Dharmakīrti's objections may be summarised thus :—If you already know for certain that 'A is not-C', the 'hetu' 'B' is useless. Again if you already know that there is no valid contradiction to the proposition 'A is C', then too the 'hetu' is useless, since its function becomes superfluous. Hence the pre-established validity of the contradiction to the conclusion establishes 'vyabhicāra' or 'asiddhi' or both. Hence 'bādha' does not constitute an independent fallacy.

Jayanta is well-reputed for his justice and fairness to the adversary. He tries his best to reinforce the position of his adversary by presenting new arguments on his behalf before going to demolish them. If the negation of the 'sādhya' is already known as truly predicated of the 'pakṣa', then the 'pakṣa' itself is transformed into 'vipakṣa' which is defined as 'niścitasādhyābhāvavān.' So the 'hetu' loses the authenticity of its character as necessitating its exclusion from 'vipakṣa' (vipakṣavyāvṛtti),

Again it is necessary for a correct 'hetu' to be present in 'sapakṣa'. Now 'sapakṣa' is a relative term which can only be understood in relation to the 'pakṣa' itself. If the 'pakṣa' loses its authentic character and turns out to be a 'vipakṣa,'

the intended 'sapakṣas', such as the pitcher etc., forfeit their character as 'sapakṣa' in the syllogism, 'vahniḥ anuṣṇaḥ kṛtakatvāt, *yathā ghaṭaḥ*'. The 'hetu' also thus forfeits its further authentic character of belonging to 'sapakṣa' (sapakṣavṛttitva)

In a syllogism where the falsity of the minor premise is easily recognised the 'asiddhi' fallacy is clearly evident. Thus in the syllogism, 'hradaḥ vahnimān dhūmāt', the minor premise, 'the lake has smoke', is false, for its absence in the lake is an established fact. The Naiyāyikas will take this instance as exhibiting the combination of two fallacies, 'bādha' and 'asiddhi'. The Budhhists will take it as a case of 'asiddhi' alone, since they do not accept 'bādha' as a separate fallacy. It should not be contended that, Dharmakīrti's dictum 'bādhāvinābhāvayoḥ virodhāt' fails in this case because the major premise 'wherever there is smoke there is fire' is quite valid. The dictum is limited by the proviso,—'provided the minor premise is not questioned'.

Gaṅgeśa thus correctly presents the Buddhist stand on 'bādha' :—["atha sādhyābhāvavati pakṣe hetoḥ sāttā-jñāne vyabhicāraḥ, tadajñāne asiddhiḥ, saṃśayayogyatvābhāvena pakṣatvābhāvāt āśrayāsiddhiśca"—A. C. G. p. 1871]

To counter the arguments of Dharmakīrti it is sometimes argued :—'pakṣe vyabhicāro na doṣaḥ'. If this dictum is not accepted all inferences should be thrown to the four winds. Against the argument, 'parvato vahnimān dhūmāt', one may then argue that the major premise is subject to violation, since we do not perceive fire in this mountain where smoke is perceived. Similarly, the Naiyāyika's argument that 'the world has a creator because it is produced' may turn false, since we do not perceive a creator of the world. The reply is given that a violation of the major premise should not be shown taking the 'pakṣa' itself as an instance of 'vyabhicāra'. The 'sādhya' is sought to be established in relation to the 'pakṣa,' because it is yet unestablished. Hence if this very unestablishedness is interpreted as a violation of the 'vyāpti' the very possibility of deductive argument is lost.

Gaṅgeśa is astute enough to sense the insufficiency of this argument. The moment you become sure that the probandum cannot be validly predicated of the minor term the major premise is bound to break down. If the minor premise is not questioned and the conclusion faces a direct contradiction which is held valid, then there is no escape from the formal implication that the major premise must be false. To sense this 'vyabhicāra' we need not at the outset present the 'pakṣa' itself as an instance, because the falsity of the major premise follows purely formally. If you are asked to show an instance of 'vyabhicāra' you may legitimately point to the 'pakṣa' itself in which the negation of the 'sādhya' is accepted as a pre-established fact. When we take the major premise alone into consideration our recognition of its general validity should not require a verifying test by reference to the specific 'pakṣa'. But if we definitely know beforehand that the 'sādhya' does not belong to the 'pakṣa' the validity of the major premise is at once questioned. In short, *the knowledge of the 'sādhya' being predicated of the 'pakṣa' is not required for entertaining the general validity of the 'vyāpti'. But the undoubted knowledge of the negation of the 'sādhya' being predicated of the 'pakṣa' necessarily implies the falsity of 'vyāpti'.*

It is true that doubt about thepresence of the 'sādhya' in the 'pakṣa' provides inspiration for inference. But the whole process of syllogistic deduction becomes a pointless exercise if the conclusion is pre-established as false. As this falsity necessarily invades the 'vyāpti' itself, 'vyābhicāra' is established as a fallacy in this case. So 'bādha' is not a fallacy by itself; it only unmistakably points to the fallacy of 'vyabhicāra' where the minor premise is not questioned, and to 'asiddhi' where the minor premise is false, but the major true.

Vallabhācārya accepts this Buddhist argument when he remarks :—"sa ca vyabhicāro bahirantaśceti vyabhicāradehāntarbhūtatvāt"—(N.L. p. 608). Śaṃkaramiśra explains :—["bāhyaḥ sapakṣaḥ, ābhyantaraḥ pakṣaḥ, tathā ca bādhe pakṣe eva vyabhicārāt na hetvābhāsāntaratvam/ na hi pakṣe pakṣa-

same vā vyabhicāra ityata āha sa ceti, doṣe sati neyam paribhāṣā ityarthaḥ "—Ibid. pp. 607—609]

The central point of this argument is that the dictum, 'na pakṣe pakṣasame vā vyabhicāraḥ', does not hold water when the validity of 'bādha' enforces the falsity of 'vyāpti.'

So Gaṅgeśa is conscious that :—it cannot be argued that the knowledge of 'vyabhicāra' is dependent on the knowledge of 'bādha', and that hence 'bādha' as the dependable (upajīvya) is different from 'vyabhicāra' as the dependent (upajīvaka). Gaṅgeśa feels the inadequacy of this defence when he remarks :—

> ["na ca pakṣe sādhyābhāvaṃ pratītya vyabhicārajñānam iti upajīvyatvād bādhaḥ pṛthak, pakṣe sādhyābhāvapratītireva hi sādhyābhāva-hetvoḥ sambandhollekhinī iti ekavittivedyatvena nopajīvyatvam"—A. C. G. p. 1871]

—Provided the minor premise is valid the knowledge of the negation of the probandum in the 'pakṣa' covers within its scope the predicational relation between the probans and the negation of the probandum. In other words, the relation between the 'pakṣa' and the negation of the 'sadhya', and the relation between the 'hetu' and the negation of the 'sādhya' become simultaneous objects of the same knowledge. So 'bādha' cannot be conceived as the 'upajīvya' on which 'vyabhicāra' depends. If you think that the knowledge of 'bādha' does not encompass the relation between 'hetu'and 'sādhyābhāva' you should take it as a case of 'asiddhi', for the minor premise is bound to be false in that case. If 'asiddhi' is not there, the knowledge of 'bādha' is bound to encompass the relation between the 'hetu' and 'sādhyābhāva'. So 'vyabhicāra' becomes 'ekavittivedya' or the object of the same knowledge as grasps the 'bādha'.

In the face of this formidable array of arguments Gaṅgeśa in his concept of 'bādha' feels the necessity of proceeding upto the *knowledge of validity* of the 'knowledge of 'bādha'. Indeed in his sequence of agruments Gaṅgeśa presents the need of the knowledge of validity in order to counter the Buddhist position. The knowledge of validity of a knowledge is different from that knowledge whose validity is known. In the case of 'bādha', in this

view, as we have seen before, we require such an object-structure of a higher knowledge as:—"the knowledge of the proposition, 'the lake has no fire' is valid". The knowledge of 'vyabhicāra' only comes after this knowledge of the validity of the condradictory propositional knowledge. In this way 'bādha' and 'vyabhicāra' are posited as separate objects of separate cognitions. We have shown before how Raghunātha has already demolished this particular defence of Gaṅgeśa. We have also seen how Gaṅgeśa has dismissed the claim of 'upādhi' to be counted as an independent fault. There Gaṅgeśa has said that 'upādhi' need not be recognised as a fault by itself, since it is only a pointer to the fault of 'vyabhicāra'. The Buddhists may equally argue :—Why the same consideration should not be brought to bear upon 'bādha' which also acts only as a pointer to 'vyabhicāra' or 'asiddhi'.

The Naiyāyikas bring forward the familiar form of defence, namely, the conceptual difference between 'bādha' and 'vyabhicāra'. The knowledge of 'bādha' directly affects the relation between 'pakṣa' and 'sādhya', the knowledge of 'vyabhicāra' directly affects the relation between 'hetu' and 'sādhya' and the knowledge of 'asiddhi' directly affects the relation between 'hetu' and 'pākṣa'. These three different relations are respectively contradicted by 'bādha', 'vyabhicāra' and 'asiddhi'. Yet this *epistemological* defence is not sufficient to meet the *logical* objection raised by the Buddhists. The direct contradiction to inference logically entails 'vyabhicāra' or 'asiddhi', and this entailment cannot be denied by the Naiyāyikas. So the counting of 'bādha' as a separate fallacy is superfluous.

Raghunātha proposes a new *epistemic* defence. He envisages a situation in which there may not be any emergence of contradiction within the process of inference progressing up to the stage of 'parāmarśa'. The contradiction may emerge in knowledge just after the emergence of 'parāmarśa'. In such a case 'bādha' prevents inference without the need of 'asiddhi' and 'vyabhicāra' standing as the objests of implicatory knowledge. In this case the knowledge of 'asiddhi' or 'vyabhicāra' emerges by implica-

tion only after the inhibition of inference by 'bādha' is already complete ; and so, looking for the implicatory knowledge of 'vyabhicāra' or 'asiddhi', though logically justified, is fruitless. In this way 'bādha' should be considered a separate fault independent of 'vyabhicāra' or 'asiddhi'—["pūrṇe ca karaṇe sākṣād anumityavirodhino vyabhicārajñānādeḥ akiñcitkaratvāt"—

A. C. G. p. 1894[

Viśvanātha in Muktāvalī explains the intention of Raghunātha.

["kiñca yatra parāmarśānantaram bādhabuddhiḥ tatra vyabhicārajñānādeḥ akiñcitkaratvād bādhasya anumiti-pratibandhakatvaṃ vācyam"—under Kārikā 71]

But we do not think that this new argument provides an adequate challenge to the Buddhist contention. Nobody denies that the knowledge of 'bādha' directly contradicts or inhibits an inference. If somebody has the knowledge that 'A is not-C' he cannot at the same time or at the immediately following moment entertain the knowledge that 'A is C'. If somebody else has the false knowledge that A is C, he can be easily corrected by showing the contradiction, 'A is not-C'. In 'parārthānumāna' the Naiyāyikas propose five constituent propositions. Let them be :—

1) hrado vahnimān
2) dravyatvāt
3) yat dravyatvavat tat vahnimat, yathā mahānasam
4) hrado dravyatvavān
5) ata eva hrado vahnimān

When somebody begins to place this syllogism the opponent may catch him at the very enunciatory proposition (pratijñā) by the counter-proposition 'hrado na vahnimān' and thus the progress of syllogism is stopped at the very outset. In a tri-propositional syllogism (omitting the first two propositions) the opponent will catch him at the very major premise—'whatever is a substance has fire', and show 'vyabhicāra' by pointing to the lake itself. The syllogism thus ceases to proceed at the very beginning.

Again let us take the argument—'hrado vahnimān dhūmāt'. If it is a five-member syllogism the proposer will be caught at the very 'pratijñāvacana'. If it is a three-member syllogism he will be caught tripping at the minor premise—'the lake has smoke', by throwing in his face the true contradictory proposition 'the lake has no smoke'.

Thus 'asiddhi' and 'vyabhicāra' belong to the very *process* of deduction, while 'bādha' by itself does not belong to the *process* itself. To show the fallacy in the process of syllogistic thought, 'bādha' must point to the resultant 'vyabhicāra' or 'asiddhi'. The possible emergence of 'bādha' after 'parāmarśa', as envisaged by Raghunātha, is a mere psychological chance which is not necessitated by anything within the process of syllogism. A logical fallacy should not be conceived on the basis of a rare psychological possibility, but on the basis of a fault in the *deductive process* itself.

Section—V

RAGHUNĀTHA'S EXAMPLE OF UNMIXED BĀDHA

A highly critical mind like Raghunātha's cannot but sense the weakness of this psychological defence against purely logical objections. Hence he has carefully discovered a syllogistic instance which involves 'bādha' without involving 'vyabhicāra' or 'asiddhi'. According to Nyāya-Vaiśesika theory a substance (dravya) is not produced together with its qualities. Since a substance is supposed to be the inherent cause (samavāyikāraṇa) of its quality, the simultaneous production of the quality and the qualified would break the causal nexus which implies a relation between an antecedent and a consequent. Hence the substance, at the moment of its production, is assumed to be without any quality. Bearing this in mind let us take the following false syllogism :—'utpattikṣaṇāvacchinnaḥ ghaṭaḥ gandhavān, pṛthvītvāt', The full syllogism comes out to be :—

"Whatever is earthy has smell. The *pitcher at the moment of its production* is earthy.

Therefore, the *pitcher at the moment of its production* has smell".

Raghunātha thinks that here the conclusion is wrong despite the correctness of both the premises. So this is an exclusive instance of 'bādha' without involving 'asiddhi' or 'vyabhicāra'. To account for the falsity of such an inference 'bādha' should be counted as an independent fallacy. Raghunātha observes :—

["ata eva utpattikālāvacchinne ghaṭe pṛthivītvādinā rūpādisādhane bādho nirābādhaṃ padam ādadhāti
—A. C. G.—p. 1917]

This discovery of an instance of unmixed 'bādha' (asaṃkīrṇabādha) appears to be a hign-grade logical ingenuity of Raghunātha. We think that on close examination this instance also fails to establish 'bādha' as a separate 'hetvābhāsa' What is the 'pakṣa' in this false syllogism ? Is it the pure pitcher or the *pitcher limited by the moment of production* ? It must be the latter, because we cannot validly say 'ghaṭaḥ gandhābhāvavān', while we can validly say 'utpattikālāvacchinnaḥ ghaṭaḥ gandhābhāvavān'. The false syllogism does not propose to establish the presence of smell in relation to the pure pitcher, but to the pitcher qualified by the moment of production. The statement 'ghaṭaḥ gandhābhāvavān' is false. Absolute negation of smell in the pitcher is not possible, because barring the moment of production smell is all along there. We take 'abhāva' here as absolute negation or 'atyantābhāva' in the special sense of negation for all time and place. Now if *absolute negation* of smell cannot be predicated of the pitcher, it does not follow hence that *absolute presence* of smell (i.e. presence for all time and place) can be predicated of the same, for the pitcher has no smell at the moment of its production. So the major premise 'whatever is earthy has smell', to be a true proposition, must have a pre-condition precluding the possible violation in the case of a pitcher as an earthy substance at the moment of its

production. In other words, this pre-condition is necessary for precluding any such misconception that the 'vyāpti' involves an absolute presence of smell in an earthy substance for all time.

This preclusion is necessary for the sake of an immaculate definition of 'vyāpti' in which the 'sādhya' must figure as the 'apratiyogin' (not-counter-correlate) of 'pratiyogi-asamānādhi-karaṇa-atyantābhāva'.* The negation of smell in the pitcher (at the moment of production) is 'pratiyogi-*samānādhikaraṇa*-atyant-ābhāva', because with reference to different segments of time both the absence and the presence of smell belong to the same 'adhikaraṇa' or locus, the pitcher. By 'pratiyogi-*asamānādhi-karaṇa*-ātyantābhāva' we mean such a negation of smell as is never and nowhere co-locative with the presence of smell in the same 'adhikaraṇa'. The 'sādhya', 'smell', is not the 'pratiyo-gin' of such a 'pratiyogi-*asamānādhikaraṇa*-atyantābhāva', because both its presence and absence with reference to different points of time are possible in the same 'adhikaraṇa', and because thus the absolute negation of smell in any earthy substance is impossible, The probans 'earthiness' is co-locative with such a probandum, i.e., 'smell'. This concept of 'vyāpti' shows that the 'pitcher at the moment of production' is already precluded from the compass of 'vyāpti' :—'whatever is earthy has smell'. If such preclusion were not premeditated by the very general definition of 'vyāpti', this particular 'vyāpti' must have been subject to the fault of 'vyabhicāra'.† Again, if this preclusion is already guaranteed from before, then you already know at the time of the knowledge of this particular 'vyāpti' that the pitcher at the moment of production has no smell. So the 'pakṣa' turns

* This concept is involved in the conclusive definition of 'Vyāpti' offered by Gaṅgeśa (siddhānta-lakṣaṇa) and is a necessary mark of recognition that in certain cases the 'sādhya' may be absent in the 'pakṣa' and 'sapakṣas' at a certain point of their space and time.

† This means that the conclusive general definition of 'vyāpti' cannot be *correctly* applied to this particular 'vyāpti' *without the established aware-ness* that an earthy substance does not possess smell at the time of its production.

out to be 'niścitasādhyābhāvavān', i.e., the negation of the 'sādhya' (smell) is truly predicated of the 'pakṣa' in your pre-established valid knowledge. The 'pakṣa' thus turns out to be 'vipakṣa' and the fallacy becomes one of āśrayāsiddhi' in the sense that this syllogism has no minor term worthy of the concept and definition of 'pakṣa', because any correct understanding of the generalisation (vyāpti) in this case must involve the consciousness that an earthy substance at the moment of production cannot possess any smell. It cannot be argued that, whether one is conscious of this limitation or not, the 'vyāpti' is correct nevertheless, for what is instrumental to a valid inference is not the *objective validity* of the 'vyāpti', but the *valid knowledge* of the 'vyāpti'.

Moreover, in placing a five-member syllogism in a debate in this case the opening debater will be tripped up by his oponent at the very enunciatory proposition (pratijñā), and the 'pakṣa' at once will be unmasked as a 'vipakṣa'. The same will happen even if the contradiction opens up just after the 'parāmarśa' and the fault will be 'asiddhi'.

Raghunātha's position is compromised from another standpoint. His instance of 'asaṃkīrṇabādha' presupposes a situation in which the conclusion is wrong despite the validity of both the premises. This is an unconvincing position. If the premises are correct valid 'parāmarśa' is bound to follow and then even Vṛhaspati cannot prevent the correct conclusion. If the major premise (vyāpti) and the minor premise (pakṣadharmatā) are accepted to be valid, then the 'parāmarśa,' correctly synthesised, must be taken as valid, and the conclusion, inevitably following, cannot be rejected as invalid. 'B is C' (whatever is earthy has smell) and 'A is B' (the pitcher at the moment of production is earthy), are true premises. Then the proper 'parāmarśa' should be :—'A is B which is C' {the pitcher at the moment of production (A) is pervaded by earthiness (B) which is pervaded by smell (C)}. This then must be a valid 'parāmarśa' in the form :—(gandha-vyāpya-pṛthivītva)-vān utpattikālāvacchinnaḥ ghaṭaḥ). Then by the law of transitive

predication the conclusion is bound to follow :—'A is C' (utpattikālāvacchinnaḥ ghaṭaḥ gandhavān).

Now if you question the conclusion you must question the 'vyāpti'-portion of 'parāmarśa', because there is nothing to be said against the 'pakṣadharmatā'-portion, since we have only the earthen pitchers in view. So, if you do not question the 'vyāpti'-portion, you should have nothing against the inevitably following conclusion. That means that if the conclusion is rejected, you cannot but take the 'vyāpti' 'B is C' (whatever is earthy has smell) with a grain salt in the sense that it must be understood along with the premeditated exclusion of the case of an earthy substance at the time of its production. Thus the contradictory of the conclusion, that is, the absence of smell in the pitcher at the moment of its production is a foregone conclusion.

The question is :—At the time of your understanding of the 'vyāpti' that you have introduced whether or not you have appreciated the fact that an earthy substance does not possess smell at the time of its production. If you have not appreciated it, it only means that you have failed to correctly apply the conclusive general definition of 'vyāpti' to this particular 'vyāpti', since you have failed to recognise the necessity of the concept of 'pratiyogi-*asamānādhikaraṇa*-atyantābhāva-*apratiyogi*-sādhya' which is involved in the general definition. This lack of appreciation has then led you to a wrong understanding of this particular 'vyāpti'. Then such a misconceived 'vyāpti' cannot escape the charge of "*sādhāraṇa-sabyabhicāra*'.

Again, if at the time of understanding the 'vyāpti' you have appreciated the fact that an earthy substance does not possess smell at the time of its production, you are not at all entitled to have for your minor term '*the pitcher at the time of its production.*'

Then, logically speaking, the 'pakṣa' at last turns out to be the 'vipakṣa' and so the fallacy of 'āśrayāsiddhi' steps in. It is for the critics to judge,—which should be the better way of preserving the purity of the principle of deduction, by

admitting that a conclusion may be wrong despite the correctness of the premises, or, by admitting that, in such a situation as in which a valid contradiction of the conclusion is possible, one of the premises must be misconceived. The Buddhists definitely stand for the latter alternative.

The Naiyāyika-position is further complicated by their admission that it is always possible to raise a 'satpratipakṣa' (counter-syllogism) against a 'bādhita' syllogism. Thus against the syllogism 'utpattikṣaṇāvacchinnaḥ ghaṭaḥ gandhavān pṛthvītvāt' it is possible to pose the counter-syllogism 'utpattikṣaṇāvacchinnaḥ ghaṭah gandhābhāvavān, svakārya-gandha pūrvakṣaṇāvacchinnatvāt (the cause being the antecedent must exist at least a moment before the effect). In that case 'satpratipakṣa' covers the scope of 'bādha' and the latter may be dismissed as a separate fallacy.

It is interesting to note that in the view of the neologicians 'satpratipakṣa' itself should be included within the scope of 'bādha'. It is counted as a separate 'hetvābhāsa' only apologetically in deference to the wishes of the revered ancient sage Gautama. Thus says Viśvanātha :—

[bādhavyāpyasatpratipakṣo bhinna eva svatantrecchena muninā pṛthagupadeśāt—Muktāvalī under Kārikā—71]

In our discussion on 'satpratipakṣa' we have finally upheld Dharmakīrti's contention against its being accepted as a separate fallacy. But if a choice is to be made between 'bādha' and 'satpratipakṣa', we think, the latter has better reasons to be treated as a separate fault. 'Satpratipakṣa' has at least the merit of covering the *process* of syllogism all along, while 'bādha' does not touch the *process* of syllogistic argument. If somebody is sure that 'A is not-C' he may at once counter the proposition 'A is C' without enquiring into the *structure* of syllogistic argument which his opponent may be pleased to pose. 'Bādha' counters the wrong conclusion without any need of considering the syllogistic argument. So 'bādha' cannot be treated as a fallacy of the deductive *process*. If you

want to relate it to the syllogistic process it must give way 'asiddhi' or 'vyabhicāra', as Dharmakīrti has convincingly shown.

Raghunātha's position is vulnerable from another standpoint also. The Buddhist theory of momentariness of the real proceeds from the notion that an object differs from moment to moment, beeause the difference in moments invades the object itself. An object limited by one moment is not the same as the object limited by another. (viśeṣaṇabhedena viśiṣṭabhedaḥ), In Raghunātha's illustration of 'asaṃkīrṇabādha', 'utpattikṣaṇāvacchinna-ghaṭaḥ' is differentiated from the 'ghaṭa' of other moments. If the two were really the same both might have equally figured as the 'pakṣa'. But it is said, 'ghaṭo gandhavān' is a true proposition, while 'utpattikṣaṇāvacchinna-ghaṭo gandhavān' is false. The same predicate cannot be both truly and falsely predicated of one and the same subject. Hence the subjects of the two propositions must be different. This only means that in relation to the 'utpattikṣaṇa' the pitcher is different from that which enters into relation with moments other than 'utpattikṣaṇa'. The difference of the 'ghaṭa' from moment to moment is only the next logical step. Thus Raghunātha in his endeavour to protect the independent status of 'bādha' as a fallacy has willy-nilly landed himself in the unwelcome Buddhist position of momentariness.* Viśvanātha seems conscious of the predicament :—If the pitcher at the moment of production is *really and exactly the same as itself at other moments* how can you find fault with the proposition that the pitcher, limited by the moment of production, has smell ? He replies that an inference in respect of a minor term involving limitation by certain points of time and space is established in our cognition (Muktāvalī under v. 71). But the.Buddhists would take it as an indirect admission that such limitation some how or other compromises the indentity of the object,

* It is interesting to note that in Padārtha-tattva-nirūpaṇa Raghunātha has rejected time as a separate reality over and above God, but has accepted the independent reality of the instant (kṣaṇa)

—Ptn pp 1-2 and pp 58-61

APPENDIX

Section—I

DIṄNĀGA AND DHARMAKĪRTI ON FALLACIES

The Buddhists have rightly dismissed the claim of 'bādha' and 'satpratīpakṣa' to be counted as independent logical fallacies. But this respect for Ockham's Razor has been offset by their long list of 'pakṣābhāsas' and 'dṛṣṭāntābhāsas'. 'Pakṣābhāsa' or the fallacy of the pseudo-'pakṣa', the faulty minor term, is deduced from the definition of 'pakṣa' itself. Diṅnāga* in Nyāyapraveśa defines 'pakṣa' as :—"pakṣaḥ prasiddho dharmī prasīddhaviśeṣeṇa-viśiṣṭatayā svayaṃ sādhyatvena īpsitaḥ"—(Gkw. ed. p. 1).

[A 'pakṣa' is that 'dharmin' (the qualified subject) which, on the strength of an established 'dharma' (hetu) qualifying it, is itself sought to be established as being qualified by another dharma (sādhya)].*

Ordinarily it is said that what is sought to be established by inference is the probandum itself in relation to the minor term. But logically it will be more correct to say that a debater seeks to establish a total proposition as the object of a valid judgment. When we conclude that the mountain has fire we establish the subject 'mountain' itself as having the predication of fire, on the strength of the fact that the same subject is already established as having the predication of the middle term 'smoke' that cannot exist without fire. Since it is the proposition as a whole that is to be established, the subject should appear as the substantive-substratum (viśeṣya-dharmin) in relation to the predicable probandum. Thus the subject itself is 'informative' (gamaka) of inferential knowledge by virtue of its having the predication of the probans, and

*Many scholars are in doubt if the author of Nyāyapraveśa is Diṅnāga himself.

again the same subject itself is the object (gamya) of inferential knowledge by virtue of its being sought to be established as having the predication of the probandum. This has been clearly stated by Kumārila :—

"sa eva cobhayātmāyaṃ
gamyo gamaka eva ca/
asiddhenaikadeśena
gamyaḥ siddhena bodhakaḥ / (Slv. Anu. v. 24-25)

This verse of Kumārila has been approvingly quoted by Vācaspati in Tātparyaṭīkā and Jayanta in Nyāyamañjarī. This logical conception of the minor term appearing both as the means and the end of knowledge follows from the fact that one total proposition is sought to be established on the basis of another pre-established total proposition, both having the same subject ; and so what is established is not just a character (sādhyadharma), but a subject having that character (sādhyadharmaviśiṣṭo dharmī eva sādhyaḥ).

The meaning of Diṅnāga's definition of 'pakṣa' has been clearly brought out by Dharmakīrti :—

["svarūpeṇaiva svayam iṣṭaḥ anirākṛtaḥ pakṣa iti,
svarūpeṇa iti sādhyatvena iṣṭaḥ svarūpeṇaiva
iti sādhyatvena eva iṣṭaḥ, na sādhanatvena api"
—Nb. K. J. R. I. ed. p. 176]

This shows that the 'pakṣa' is to be established as the subject of a proposition in which the probandum can be validly predicated of it.

In the context of identifying a pseudo-'pakṣa', what is significant in Dharmakīrti's definition is the expression 'anirākṛta'. Dharmottara explains :—'pratyakṣādibhiḥ anirākṛtaḥ yaḥ arthaḥ sa pakṣa ityucyate' (Ibid.) This is nothing but a repetition of Diṅnāga's remark in Nyāyapraveśa :—'pratyakṣādyaviruddhaḥ' (p. 1). It means that a real 'pakṣa' must be one which cannot be validly contradicted or discarded by accepted valid judgments of perception and the like.

In Nyāyapraveśa Diṅnāga classifies fallacies into three types :—'pakṣābhāsas' (fallacies of the pseudo-'pakṣa)', 'hetvābhāsas' (fallacies of the pseudo-'probans') and 'dṛṣṭāntābhāsas' (fallacies of the pseudo-illustration). 'Pakṣābhāsas' and 'dṛṣṭāntābhāsas' are not really logical fallacies, because logically they are covered by 'hetvābhāsas'. Hence Prof. Stcherbatsky is amply justified in reserving the term 'logical fallacies' only for 'hetvābhāsas'. 'Pakṣābhāsas' are logically covered by 'asiddha hetvābhāsa'. Since a pseudo-'pakṣa' is not a logical 'pakṣa', the 'hetu' forfeits its character of 'pakṣadharmatā'. A real 'pakṣa' conforming to its definition (pratyakṣādibhiḥ anirākṛtaḥ) being absent, the 'hetu' cannot be related to the 'pakṣa' that is *logically* absent and thus the 'hetu' is caught in the fallacy of 'āśrayāsiddhi.*

Similarly 'dṛṣṭāntābhāsas' should not also be considered as forming a separate group of logical fallacies. After dealing with 'hetvābhāsas' Dharmakīrti goes on to justify his deliberate omission of any separate definition of 'dṛṣṭānta' or illustration :—"trirūpo heturūktaḥ iti na pṛthag dṛṣṭānto nāma sādhanāvayavaḥ kaścit tena nāsya lakṣaṇaṃ pṛthagucyate gatārthatvāt"

—(Nb. p. 244).

—A separate definition of 'dṛṣṭānta' is needless. 'Dṛṣṭānta' should not be accepted as a member of the syllogism. A correct logical 'hetu' has already been defined as having three inalienable characters :—*sapakṣavṛttitva, vipakṣavyāvṛtti* and *pakṣadharmatā*. The first two characters of the 'hetu' fully cover the notion of 'dṛṣṭānta' both in the positive and the counter-positive aspects. Hence a dṛṣṭānta' need not figure as a part of the syllogism proper. At the end of his discussion on wrong examples Dharmakīrti remarks :—

["na hi ebhiḥ dṛṣṭāntābhāsaiḥ hetoḥ sāmānyalakṣaṇaṃ sapakṣe eva sattvaṃ vipakṣe ca sarvatra asattvam eva

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* The Nyāyabindu shows four kinds of 'pakṣābhāsa' while the Nyāyapraveśa shows nine. The latter calls them 'pratijñādoṣa' i. e. inherent fault of the very thesis to be established. The Naiyāyikas would transfer most of them to 'bādhita hetvābhāsa'

niścayena śakyaṃ darśayituṃ, viśeṣalakṣaṇaṃ vā / tadarthāpattyā eṣāṃ nirāso draṣṭavyaḥ"

—Nb. p. 253]

—An example is placed in order to demonstrate or suggest the necessary relation between the probans and the probandum. But this necessity is expressed in the very *general character* of the 'hetu', i.e., its presence in positive instances and its total exclusion from counter-instances. The special character of the 'hetu' rests in its being either a 'svabhāvahetu' or a 'kāryahetu'. The 'hetu' figuring as the subject of an analytical general proposition serving as the major premise is cailed 'svabhāvahetu'. In such a proposition the probandum standing as the predicate is conceptually included in the subject, The stock example of an inference from 'svabhāvahetu' is :—"whatever is a 'śiṃśapā' is a tree, this is a śiṃśapā' ; therefore, this is a tree". The concept of tree-ness is a part of the concept of 'śiṃsapā-ness'. Siṃśapā-ness' is constituted by its special character as a species of tree which differentiates it from other trees, and also by its higher generic character as a tree, Thus the proposition "A 'śiṃsapā' is a tree" is an assertion of the generic character of treeness in relation to the species 'śiṃśapā'. As such the proposition analytically posits as its predicate the higher essential character of the subject itself. The predicate which is included in the notion of the subject is logically abstracted out of it and separately fixed as a constructed predicate. The difference between the subject and the predicate is purely logical, but not material or factual. From this standpoint such a major premise, as in which a higher generic character is predicated of a lower species, is a typical example of 'tādātmyavyāpti' or generalisation based on identity. Another famous example of 'tādātmyavyāpti' is the Buddhist proposition of momentariness,—'yat sat tat kṣaṇikam' (whatever is existent is momentary). It has been elaboratety shown in Hetubindu and Arcata's commentary there on how the concept of existence properly analysed encompasses the concept of momentariness. Such a proposition can be easily distinguished from a general proposition based on the causal relation,

e.g., 'wherever there is smoke there is fire'. It provides for an inference from the effect to the cause, and the middle term is called 'kāryahetu'.

Now a wrong example fails to bring out either the general character or the special character of the 'hetu', and so does not serve the purpose for which it is placed in the syllogism. The example is fallacious in so far as it does not confirm or does violate the essential character of a 'hetu'. If the fault of the example invades the 'hetu' in its relation to the 'sādhya' it logically passes to 'anaikāntika hetvābhāsa'. Since an example is meant for demonstrating the truth of the major premise, whatever is wrong in it should belong to the premise. At the close of the Nyāyabindu Dharmakīrti remarks that the fallacies which should be demonstrated for refuting an argument are really 'hetvābhāsas' or fallacies of the middle term. These are the fallacies of deficient reason, namely, *asiddha*, *viruddha* and *anaikāntika*. The exposure of any one or more of these fallacies is enough for refutation, This shows that the so-called fallacies of 'pakṣa' and 'dṛṣṭānta' are not really logical fallacies. Logically they should be and can be transferred to 'hetvābhāsas'.*

Both in Nyāyapraveśa and Pramāṇasamuccaya Diṅnāga includes the fallacy of antinomy (satpratipakṣa) within the fold of 'anaīkāntika hetvābhāsa'. He has used the term 'viruddhāvyabhicārin' to mean the same. In Nyāyabindu Dharmakīrti raises the question as to why he has not mentioned the so-called antinomical fallacy, though it has been mentioned as a type of 'anaikāntika' by Diṅnāga. Dharmakīrti answers that it is simply logically impossible that two contradictory statements can both be true. Diṅnāga has mentioned this fallacy with the erroneous dogmatic systems in his mind. Some metaphysical propositions may be founded upon dogmatic premises not logically borne by facts. In such cases dogmatic assertions may be blocked by

* In his comm. on Hetubindu Arcata shows at length why 'dṛṣṭānta' has no *logical* utility. At best 'dṛṣṭānta' may serve the purpose of refreshing one's memory about 'vyāpti'. Moreover one may show a co-instantial example even in an 'anaitkāntika-hetvābhāsa'. Hbt. pp. 62-63

antinomical arguments counter-balancing the arguments of the opponent. Diṅnāga in his Nyāyapraveśa gives an instance of 'viruddhāvyabhicārin' which is exactly given as an instance of 'satpratipakṣa' by Annaṃbhaṭṭa in his Tarkasaṃgraha :—

1. nityaḥ śabdaḥ śrāvaṇatvāt, śabdatvavat
2. anityaḥ śabdaḥ kṛtakatvāt, ghaṭavat

The first assertion is simply countered by the second assertion without going deeper into the truth or falsity of the major or the minor premise involved herein. A decision is blocked without ascertaining the truth. So antinomy is not really a fallacy. It is really meant for blocking the disputant's proposition without establishing one's own position.

Section—2

CLASSIFICATION OF FALLACIES IN NYĀYAPRAVEŚA

Anaikāntika

Diṅnāga's classification of 'anaikāntika' is interesting on account of its showing the range of violation of the major premise. Of course, the widest possible violation is found in 'viruddna hetvābhāsa' in which the assumed 'hetu' is always pervaded by the absence of the assumed 'sādhya' and so there is no scope of its exissence anywhere where the 'sādhya' is accepted as present. The logical dlstance between the 'hetu and the 'sādhya' is here at its longest. On the other extreme stands the 'asādhāraṇa' in which the 'hetu' is related neither to 'sapakṣa' nor to 'vipakṣa' so that we have no way of saying either for or against it. Thus logically here the distance between the 'hetu' and the 'sādhya' is at its shortest, because we cannot definitely say if the 'vyāpti' is violated or not. Proceeding along the range of violation we come to the type (1) of 'anaikāntika' which is called '*sapakṣaikadeśavṛttiḥ vipakṣavyāpī*'. It is illustrated by 'śabdaḥ aprayatnānantarīyakaḥ anityatvāt,'—sound is 'not-invariably-related-to-mental-

effort' (as its cause), because it is not eternal. Here the 'vipakṣas' are the pitcher etc. which are invariably related to mental effort, and also are pervaded by the hetu 'non-eternity'. The 'sapakṣas' here are both the non-eternal objects like lightning etc. which are not produced by any body's will and also the eternal objects like ether etc. which are not produced at all. The 'hetu' 'not-eternity' is present in a part of the 'sapakṣas', i.e., lightning etc., but not in the other part, i.e., ether etc. In comparison with 'viruddha' here the range of violation narrows down somewhat, for the middle term meets a part of 'sapakṣas' at least.

The range of violation in further shrunken when the absence of relation between the 'hetu' and the 'sadhya' becomes roughly counter-poised by the presence of the relation. We may call it the middle range of violation. This is illustrated in 'sādhāraṇa anaikāntika' (2). The instance is 'śabdaḥ nityaḥ prameyatvāt' (sound is eternal, because it is knowable). The 'hetu' 'knowability' encompasses the whole universe and so is common to both eternal (sapakṣa) and not-eternal (vipakṣa) objects. The probans is comprehensively distributed between the absence and the presence of the probandum.

Another variety (3) of this middie-range violation is called *ubhayapakṣaikadeśavṛtti*, i.e., where the 'hetu' exists both in a part of 'sapakṣas' and a part of 'vipakṣas'. The instance is is 'sabdaḥ nityaḥ amūrtatvāt' (sound is eternal because it is inactive). The 'sapakṣas' here are the eternal objects like the sky, the atom etc. The probans 'inactivity' is present in a part of 'sapakṣas' such as the sky, but is absent in another portion of 'sapakṣas' like the atom etc. The probans both meets and does not meet the 'sapakṣas' in parts. Again the 'vipakṣas' are the pitcher, happiness etc. which are not eternal. The probans 'inactivity' is present in a part of the 'vipakṣas' such as happiness and is also absent in another part of the 'vipakṣas' such as the pitcher. The probans thus meets a section each of both the 'sapakṣas' and 'vipakṣas'. It also *does not meet* a section each of 'sapakṣas' and 'vipakṣas'. In this sense it

has got an approximately equal distribution between the presence and the absence of the probandum. So this may also be called an instance of middle-range violation. The distinction from the example of 'sādhāraṇa anaikāntika' is determined by the all-pervasive character of the 'sādhāraṇa probans'. Knowability covers the whole universe and thus equally meets ali possible 'sapakṣas' and 'vipakṣas'

From this middle range the violation of the major premise further narrows down in the variety (4) of 'anaikāntika' which is called *vipakṣaikadeśavṛtti-sapakṣavyāpī*. The instance is—'śabdaḥ prayatnānantarīyakaḥ anityatvāt' (sound is invariably-related-to-mental-effort, because it is non-eternal). The 'sapakṣas' are the pitcher etc. which are pervaded by the probans 'non-eternity'. The 'vipakṣas' are the lightning, the sky and so on (which are not invariably related to mental effort). But the probans 'anityatva' touches a part of 'vipakṣas', i.e., lightning etc. and not the other part like the sky etc. Here we can no longer speak of the even distribution of the probans between the absence and the presence of the probandum, because the probans touches all the 'sapakṣas' and only a part of the 'vipakṣas'.

In both *asādhāraṇa* (5) and *viruddhāvyabhicārin* (6) the violation comes to its narrowest range. In 'asādhāraṇa', because the probans is totally excluded from all 'sapakṣas' and vipakṣas' and is confined to the 'pakṣa' alone, we cannot say from the character of the probans itself whether the major premise is anywhere violated or not. In 'viruddhāvyabhicārin' also the violation is not proved, because two contradictories have blocked each other. *We habe re-arranged the six varieties of 'anaikāntika' in the descending order of violation of the 'vyāpti'*.

Asiddha

Asiddha has been classified into four types :—

(1) In *ubhayāsiddha* the probans is unestablished in relation to the minor term both according to the respondent and the

opponent. The example is—'śabdaḥ anityaḥ cākṣuṣatvāt' (sound is not-eternal, because it is visible). Here both the respondent and the opponent have got to agree that the minor premise 'sound is visible' is false. The probans 'visibility' is accepted by both the parties as unestablished in relation to the minor term. The range of unestablishedness of the probans is here at its greatest.

(2) In *anyatarāsiddha* the probans is unestablished either for the respondent or for the opponent, but not for the both. This is important and interesting on the account that if the minor premise is questioned the line of debate is at once deflected towards establishing the minor premise. The Naiyāyika states—'śabdaḥ anityaḥ kṛtakatvāt'. If the opponent is a Mīmāṃsaka he will at once challenge the minor premise 'sound is created', and will not allow the Naiyāyika to proceed further before the latter can satisfactorily prove the validity of the minor premise.

(3) In *sandigdhāsiddha* the term that is posed as the probans is itself doubtful. Suppose somebody looking at a meadow from a fair distance takes it as containing fire, seeing smoke rising from it. His companion may raise the question :—'how do you take it to be smoke ? It may be vapour or dust kicked up by wind'. The middle term is thus subject to doubt, and before we can ascertain if it is smoke or not we can say nothing about the conclusion.

(4) Diṅnāga's example of 'āśrayāsiddha' is also interesting from the point that the very minor term may be questioned by the opponent, though the respodent thinks it all right. Take the argument—'akāśaṃ dravyaṃ guṇāśrayatvāt' (ether is a substance, because it possesses properties). If the opponent is a Buddhist or Cārvākite he will challenge the minor term itself, because he does not recognise ether as a real object at all. The respondent will be challenged to establish the reality of ether. The direction of the debate will be then turned towards a new problem. It should be noted that Diṅnāga's example of 'āśrayāsiddha' fares better than the example of the Naiyāyika who

normally illustrates this fallacy by taking as minor terms such impossible objects as the skyflower or golden mountain. Such minor terms are too absurd to be seriously considered as objects of debate. But in Diṅnāga's example the opponent will block the argument at the very outset by challenging the proposer to prove the ontological status of the minor term.

Viruddha

Diṅnāga divides 'viruddha' into four types,—(1) dharmasvarūpaviparītasādhana, (2) dharmaviśeṣaviparītasādhana, (3) dharmisvarūpaviparītasādhana, (4) dharmiviśeṣaviparītasādhana.

(1) The first type is illustrated by an example which the Naiyāyikas generally present as a well-known illustration of 'viruddha'—'nityaḥ śabdaḥ kṛtakatvāt'. The prohans 'kṛtakatva' establishes the character 'non-eternity', just the opposite of the character 'eternity' which is the intended probandum.

(2) The instance of the second type is interesting, for it shows the fallacy in the Sāṃkhya inference of the soul. This familiar inference applied by the Sāṃkhya runs as follows :—'cakṣurādayaḥ parārthāḥ saṃghātatvat, śayanādivat' (whatever is a composite object serves the purpose of *somebody else*, e.g., a bedstead. Objects like the sense-organs, etc. are composite objects ; therefore, they serve the purpose of somebody else). The Sāṃkhya means that this 'somebody else' is the permanent soul 'puruṣa'. This is challenged by the Buddhists.

According to the Sāṃkhya view the soul is an indivisible monolithic unit of consciousness. The purpose of the Sāṃkhya cannot be served simply by proving that a composite object exists for others. It must also prove that this 'other' must be a non-composite object, otherwise the soul cannot be established. But the probans 'compositeness' establishes only a *composite* other object on the strength of the example, bedstead, which exists for the physical comfort of the composite human body. It does not prove that the 'other', for which the composite objects, sense-organs, bedstead etc. exist, is a non-composite unitary

consciousness, The Sāṃkhya does not intend to prove simply 'pārārthya' or 'existence for *other's* purpose'. But it wants to prove a special property of the probandum, namely, the non-compositeness of the 'other' (sādhyadharmaviśeṣa—asaṃhata-parārthatva'. Yet this special property of the 'sādhya' has not been proved. On the contrary, what rather unwillingly comes to be proved is just the opposite of the intended property of the probandum.

(3) The illustration of the third type has a special significance, for the probans here, shown as establishing the probandum, may also be shown as establishing the contradictory of the minor term (dharmisvarūpaviparīta-sādhana). Diṅnāga illustrates this type of 'viruddha' in the following example :— 'bhāvaḥ na dravyamn a guṇaḥ na karma ; ekadravyavattvāt, guṇakarmasu ca bhāvāt, sāmānyaviśeṣavat'. Here the minor term 'bhāva' stands for 'sattā' (being or existence), the supreme universal according to the Nyāya-Vaiśeṣika theory. It is not a substance, since it may have for its locus even a slngle *unconstituted indivisible* substance such as the atom, the soul etc. The Vaiśeṣikas think that a substance may be only of two kinds, *adravya* and *anekadravya*. An *adravya* substance is a non-composite object which is not constituted of substantive constituents, i.e., it has no parts as its constituent substances. Thus the sky, the atom, the soul etc. are *adravya* substances, because they are not formed by collocation of organised substantive parts as the constituents. So they are indivisible units.

Again the substances beginning from 'dvyaṇuka' (dyad) onwards are *aneka-dravya* substances, for they are constituted of parts which are themselves substances. The highest universal, being or existence, to be a substance, should have been either *adravya* or *anekadravya*. But it is neither of the two. An *adravya*-substance, having no constituents, does not exist in any locus through the relation of inherence (samavāya). But 'existence' or 'being' exists by inherence even in a non-composite substance like an atom. Again an *anekadravya*-substance exists in its parts through inherence. But a universal has no parts. Hence a

universal, being excluded from the domain of both *adravya* and *anekadravya* substances, cannot itself be a substance. Existence is a universal, and hence not a substance ; e.g., the *particular* universal 'dravyatva' which belongs through 'inherence' (samabāya) to partless unitary substances like atom etc., but is itself not a substance. The probans "ekadravyavattva" here means "having for one's locus a unitary partless substance (through inherence). No substance can *inhere* in such a substance. The example 'sāmānya-viśeṣa' here means the *particular* universal 'dravyatva', Since a universal has no parts the question of 'aneka-dravya' does not arise.

An action does not belong through inherence to another action. But 'existence' belongs to an action through the same relation. So 'existence' is not an action (karma). Here the example is the *particular* universal 'karmatva' which unlike 'karman' is 'inherent' in 'karmans'. Similarly, a quality is not inherent in another quality. But 'existence' exists in a quality through inherence. Thus 'existence' cannot be a quality. Here the example is the *particular* universal 'guṇatva' which unlike 'guṇa' is inherent in 'guṇas'. Hence, 'existence' as a universal is neither a substance, nor an action, nor a quality.

The Buddhists expose the fallacious character of this Vaiśeṣika syllogism. One may equally argue that :—'existence (bhāva) is non-existence (abhāva), because it is inherent in a non-composite substance, just like substantivity (dravyatva) which belongs to atom etc. 'Dravyatva' is a universal, but is *different* from the universal 'existence'. So it is '*non-existence*'. Thus the probans 'ekadravyavattva' may establish '*non-existence* also which is the contradictory of the 'pakṣa' '*existence*'. Similarly, the probans, 'guṇeṣu bhāvaḥ' or 'karmasu bhāvaḥ', would go to prove that 'existence is non-existence', because the examples 'guṇatva' or 'karmatva' is 'non-existence' in a similar way. In our view this exposure of the fallacy in this particular instance is not very convincing. The probans 'ekadravyavattva' belongs to 'dravyatva' which is 'non-existence', i.e., different from the universal 'existence'.

The same probans belongs to 'existence' also. The author of Nyāyapraveśa means to say (acc. to commentators) that the probans, thus commonly belonging to both 'existence' and *non-existence*', also may establish *non-existence* of the minor term 'existence', This is an absurd argument, because its acceptance would demolish the very possibility of syllogistic inference. One may equally argue that :—"the mountain is not-mountain, because it has smoke just as the kitchen". The probans 'smoke' equally belongs both to the mountain and the kitchen which is 'not-mountain.' Thus on the same line of argument the probans 'smoke' would prove the mountain to be a not-mountain.

Pārśvadeva, the sub-commentator of Haribhadra's commentary on Nyāyapraveśa has taken pains to offer a charitable interpretation of Diṅnāga's intention. He says that 'dravyatva' is contradictory to 'bhāva' or 'existence', since it is '*a-bhāva*' or non-'existence'.

In this way the 'sapakṣa' 'dravyatva' turns to be the 'vipakṣa.' Following this line of argument one may equally argue that the kitchen is also contradictory to the mountain, because it is not-mountain. Hence the kitchen too turns out to be a 'vipakṣa'. The 'hetu' 'smoke' belongs to the 'vipakṣa.' Thus it is vitiated by the fallacy of contradictoriness (virudha-lakṣaṇatā), and so it establishes the mountain itself as the not-mountain. The absurdity of the argument may be shown in the following way :—

A man is mortal
A bird is mortal
A bird is not-man
∴ A man is not-man

or { a man is not-bird
∴ a bird is not-bird }

Anyway we fail to understand the real meaning of this particular illustration of 'viruddha' fallacy provided by the author of Nyāyapraveśa.

4. The same illustration goes to furnish the example of the fourth type of 'viruddha', namely, 'dharmiviśeṣa-viparīta-

sādhana'. 'Existence' as the supreme universal category is supposed by the Vaiśeṣika to be the object which is responsible for engendering the persistent positive cognition of '*being*' (*sat*), such as 'this *is*', 'this *is*' and so on. So it is '*sat*-pratyaya-kartṛ'. Here 'pratyaya' means congnition.

Now 'dravyatva', the example, is responsible for engendering the persistent cognition of '*substance*' such as 'this is a *substance*, this is a *substance* and so on. So it is different from '*sat*-pratyayakartṛ', because it is '*dravya*-pratyayakartṛ'. Hence it is '*a-sat*-pratyayakartṛ'. Thus on the strength of the example 'dravyatva' (also 'guṇatva' and 'karmatva') what we get proved about the minor term 'existence' is the opposite of its property that is intended to be established, that is, we get {*not*-(*sat*-pratyayakartṛ)} or, {*not*-(engendering the positive cognition of *being*)} instead of the intended property, '*sat*-pratyayakartṛ' or 'engendering the positive cognition of *being*.'

Our objection against the exposure of this fallacy is the same as we have said before under (3). As far as we can learn from the commentators we are not satisfied that we have been able to understand what the author of Nyāyapraveśa means to say.

The accusations against this Vaiśeṣika syllogism will be transferred by the Naiyāyika to the class of sophistries (jāti-false accusation). The commentators are conscious of it and take pains to defend the author of Nyāyapraveśa, but unconvincingly, we think. We stop here without further elaboration.

It is to be noted that Dharmakīrti has not accepted these illustrations of 'viruddha hetvābhāsa' found in the Nyāyapraveśa. In his Nyāyabindu he is satisfied with one example, śabdaḥ nityaḥ kṛtakatvāt. In his view absence of the probans in the co-instances and presence in the counter-instances together constitute the essence of 'viruddha hetvābhāsa.'

CORRIGENDA

The lines to be counted from the page-heading (inclusive)

TEXT

Read (*correct*)	*For* (*incorrect*)	*Page*	*Line*
necessary	neccssary	1	18
traditionalists	traditionatists	4	4
1603	1633	6	3
knowledge	khowledge	7	22
have	has	14	9
DEFINITION	DEFFINITION	17, 19, 21, 23, 25, 27, 29, 31	Page-heading
lake)ness	lakeness)	29	31
the	tha	42	6
ghaṭita	ɥᵷɐṭita	47	24
cannot	cannon	56	4
definition	dcfinition	56	18
and	any	58	18
suffice	suffic	58	24
also explains	alsoe xplains	73	19
asādhakatvāt anāpādakatvāt ca	asādhakatvāt ca	75	12
favour	vavour	95	27
instance	istance	101	11
viruṇaddhi	viruṇaddhī	114	9
pratiyogin	protiyogin	116	footnote last line
Gaṅgeśa	Gañgeśa	117	last line
then	thed	138	11
dilemma	dilema	140, 145	10, 20
cannot be	cannot to	159	30
up to	upto	wherever found	

ABBREVIATIONS

A.C.G.	Anumānacintāmaṇi-Dīdhiti-Gādādharī (Chowkhamba, Benares)
A.C.J.	Anumānacintāmaṇi-Dīdhiti-Jāgadīśī (Chowkhamba, Benares)
T.C.	Tattva-cintamaṇi with Māthurī (Calcutta and Benares)
N.D.	Nyāyadarśana (Mithila)
Ns.	Nyāyasūtras
Ns. V.	Nyāya-Vārttika (Mithila)
Hbp.	Hetubindu-Prakaraṇa (Baroda)
Hbt.	Hetubindu-Tīkā of Arcaṭa (Baroda)
Nb.	Nyāyabindu
Nbt.	Nyāyabindu-Tīkā of Dharmottara (K. J. R. I.)
Nk.	Nyāyakusumāñjali (Benares, 1912)
N. L.	Nyāya-Lilāvati (Chowkhamba, Benares)
K.J.R.I.	Kasiprasad Jayaswal Research Institute, Patna.
Ptn.	Padārtha-tattva-nirupaṇa of Raghunātha (Benares)
Ślv.	Sloka-Vārttika of Kumārila
GKW.	Gaekwad Oriental Series, Baroda
V.D	Vaiśeṣika-Darśana (V. S. V. ed. Benares)

GLOSSARY

Anuyogin	Correlate
Anuyogitā	Correlativity
Pratiyogin	Counter-correlate
Pratiyogitā	Counter-correlativity
Avaccheda	limitation
Avacchedaka	limitor
Avacchedaka dharma	limiting character or property
Avacchedakatā	limitor-ness
Avacchedya	limitable
Avacchedyatā	limitability
Avacchinna	limited
Avacchinnatā	limitedness
Ekajñāna-viṣaya	Cognitive co-content
Ekajñāna-viṣayatā (-tva)	Cognitive co-contentiveness
Ekajñāna-vedya Ekavitti-vedya Tulya-vittivedya	Co-apprehenible, Co-cognizable
Ekajñāna-vedyatā (-tva) Ekavitti-vedyatā (-tva) Tulya-vitti-vedyatā (-tva)	Co-apprehensibility, Co-cognizability
Nirūpaka	determinant
Nirūpya	determinable
Nirūpya-nirūpaka-sambandha	Relation of determinance
Paraspara-nirūpya-nirūpaka-sambandha	relation of co-derminance, co-determinability.
Nirūpakatā (-tva)	determinance
Nirūpyatā (-tva)	determinability
Viṣaya	object, content, object-content
Viṣayatā (-tva)	object-ness
Viṣayaln	subject
Viṣayitā (-tva)	subjectness
Viṣaya-viṣayi-sambandha	subject-object relation.

Viśiṣṭa-vaiśiṣṭya	relation of relations, qualified relation.
Viśeṣya	substantive
Viśeṣyatā (-tva)	substantivity
Viśeṣaṇa	adjective
Viṣésaṇatā (-tva)	adjectivity
Prakāra	congnitive adjective
Prakāratā (-tva)	congnitive adjectivity
Vyāpaka	pervasive, pervader
Vyāpakatā (-tva)	pervasiveness
Vyāpta	pervaded
Vyāpya	pervasible
Vyāpyatā (-tva)	pervasibility
Vyāpti	pervasion, generalisation, inductive generalisation.
Samānādhikaraṇa	Co-locative,
Sāmānādhikaraṇya	Co-locativity, Co-locativeness
Vyadhikaraṇa	Counter-locative, non-co-locative
Vaiyadhikaraṇya	Counter-locativity, non-co-locativity
Hetu, liṅga, sādhana	probans, reason, middle term
Sādhya	probandum,major term
Pakṣa	minor term, subject
Sapakṣa	co-instance
Vipakṣa	counter-instance
Parāmarśa	Synthetic judgment involving the relation between the minor premise and the major premise.

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Gaṅgeśopādhyāya Raghunātha Śiromaṇi Gadādhara Bhaṭṭācārya	Anumānacintāmaṇi - Dīdhiti-Gādādharī (Chowkhamba, Benares)
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Jagadīśa Tarkālaṅkāra	Sāmānyanirukti-Jāgadīsī (Yadavendra's ed. Calcutta)
Jānakīnātha Bhaṭṭācārya Cūḍāmaṇi	Nyāyasiddhānta-mañjarī (Benares)
Maṇikāṇṭhamiśra	Nyāyaratnam (Madras)
Raghunātha Śiromaṇi	Padārtha-tattva-nirūpaṇa (Benares 1916)
Vāmācaraṇa Nyāyācārya	Gādādharī-savyabhicāra-Tīkā (Benares)
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